



## The type specimens of sawflies (Hymenoptera: Symphyta) of the Museo Nacional de Ciencias Naturales, Madrid

ANDREAS TAEGER<sup>1,3</sup>, MERCEDES PARÍS<sup>2</sup> & JOSE LUIS NIEVES-ALDREY<sup>2</sup><sup>1</sup>Senckenberg Deutsches Entomologisches Institut (SDEI), Eberswalder Straße 90, 15374 Müncheberg, Germany.E-mail: [ataeger@senckenberg.de](mailto:ataeger@senckenberg.de)<sup>2</sup>Museo Nacional de Ciencias Naturales, Madrid (MNCN, CSIC) c/ José Gutiérrez Abascal 2, 28006 Madrid, Spain.E-mail: [m.paris@mncn.csic.es](mailto:m.paris@mncn.csic.es); [aldrey@mncn.csic.es](mailto:aldrey@mncn.csic.es)<sup>3</sup>Corresponding author

### Abstract

The type specimens of sawflies (Hymenoptera: Symphyta) housed in the Museo Nacional de Ciencias Naturales, Madrid, were examined. Lectotypes are designated and illustrated for the following 32 nominal taxa (preserved in the MNCN collection if not stated otherwise): *Tenthredo acutiscutis* Konow, 1908; *Tenthredo aericeps* Konow, 1907; *Allantus albipectus* Konow, 1907; *Athalia bolivari* Dusmet, 1896; *Tristactus punctatus* var. *candidatus* Konow, 1899; *Tenthredo capistrata* Konow, 1907; *Megalodontes capitalatus* Konow 1904 (coll. SDEI); *Tenthredo casta* Konow, 1908; *Clydostomus cestatus* Konow, 1908; *Miocephala chalybea* Konow, 1907 (coll. SDEI); *Peus cupreiceps* Konow, 1907; *Metallopeus cupreolus* Malaise, 1945 (coll. NHRS); *Allantus dusmeti* Konow, 1894 (coll. SDEI); *Megalodontes dusmeti* Enslin, 1914 (coll. ZSM); *Megalodontes escalerae* Konow, 1899; *Tenthredo flavitarsis* Konow, 1908; *Sciopteryx galerita* Konow, 1907; *Tenthredo habenata* Konow, 1907; *Allantus inguinalis* Konow, 1908; *Clydostomus merceti* Konow, 1908; *Megalodontes merceti* Konow 1904 (coll. SDEI); *Tenthredo mordax* Konow, 1908; *Megalodontes mundus* Konow, 1904; *Tenthredo nimbata* Konow, 1906; *Tenthredo oculissima* Konow, 1907; *Peus pannulosus* Konow, 1907; *Tenthredo podagrica* Konow, 1907; *Arge segmentaria* var. *rufiventris* Konow, 1899; *Tenthredo rugiceps* Konow, 1908; *Tenthredo segregata* Konow, 1908; *Peus splendidus* Konow 1907; *Tenthredo suta* Konow, 1906. *Peus cupreiceps* Konow, 1907, is considered to be a valid species. New synonymy is proposed for *Tenthredo* (*Metallopeus*) *cupreiceps* (Konow, 1907), **comb. nov., spec. rev.** (= *Metallopeus cupreolus* Malaise, 1945, **syn. nov.**; = *Metallopeus inermis* Malaise, 1945, **syn. nov.**).

**Key words:** Insecta, Tenthredinidae, Megalodontesidae, lectotypes, new synonyms, India (Sikkim), Spain, Cameroon, Turkey, Konow, Malaise, Dusmet

### Introduction

In the course of a SYNTHESYS project, the first author studied in 2012 the sawfly collection of the Museo Nacional de Ciencias Naturales, Madrid (MNCN). The Symphyta specimens in this collection were collected mainly during the end of the 19<sup>th</sup> and first decades of the 20<sup>th</sup> century. Important collectors of this period were Ricardo García Mercet (1860–1933, Fig. 01), Manuel Martínez de la Escalera (1867–1949, Fig. 02), and José María Dusmet y Alonso (1869–1960, Fig. 03) (Martín Albaladejo, 2004); in fact, most of the specimens listed in this catalogue came to the MNCN entomology collection through Escalera. Whereas Mercet and Escalera never published about sawflies, Dusmet wrote two important papers about the Spanish Symphyta (Dusmet 1896, 1949) and described a new species. Most of the species that are treated below were described between 1894 and 1908 by Friedrich Wilhelm Konow (1842–1908, Fig. 04) based on material he got via Dusmet from the MNCN. Frequently, Konow kept specimens (syntypes) of his new species in his collection (now housed in the Senckenberg Deutsches Entomologisches Institut, SDEI). In his papers it is not always immediately clear, where the types are housed. For example, a remark about the types of *Allantus asperatus* can be found some pages after its description, below *Tenthredo suta*: “Die beiden neuen *Tenthredo*-Arten sowie den *All. asperatus* verdanke ich Herrn Prof. R. Mercet,

in dessen Sammlung sich die Typen befinden.” [translated: ‘For the two new *Tenthredo* species, as well as the *All. asperatus* I am indebted to Prof. R. Mercet, in whose collection are the types.’]. In several cases, there is no indication on the whereabouts of the types, except for a remark by Konow that he got the material through Dusmet, Mercet, or Escalera. Such remarks were frequently overlooked by subsequent authors. As a result, some lectotypes were selected in the past from the Konow collection (=SDEI) instead of the MNCN collection. As the specimens in Konow’s collection are to be considered as syntypes, these actions are valid, and the specimens in the MNCN thus became paralectotypes. Until now, most of Konow’s types in the MNCN have obviously not been examined since the description of the species. The subsequent interpretation of the taxa was based either on the original description, or on the syntypes housed in Konow’s collection in the SDEI (compare Malaise 1945, Saini 2007).



**FIGURES 1–4.** Portraits (from left). Mercet (Archivo MNCN. Sign. Album de Entomología, p. 16), Escalera (Archivo MNCN. Sign. Album de Entomología, p. 14), Dusmet (Archivo MNCN. Sign. ACN009/001/00092), Konow (Portrait collection of the SDEI).

## Material and methods

The treated species are usually rather large and colorful. In most cases, the photographs of the lectotypes will provide sufficient information to enable future checks on the placement of the taxa to be made. Furthermore, the information about the state of preservation at the time of examination, as well as the data of the attached labels can be taken easily from the given photographs. In addition to the figures given in the present paper, figures are presented at figshare.com. These figures may contain additional views, or are of specimens not figured in this paper. The permanent links (DOIs) to the high resolution figures at figshare.com are included here.

Photos were taken at the MNCN with a Leica DFC 420C digital camera attached to a M80 compound microscope, at the SDEI with a Leica DFC 495 camera and a M205 C microscope. Malaise’s specimens were photographed at the NHRS with an Olympus DP70 camera attached to a SZX12 microscope. Composite images with an extended depth of field were created from stacks of images using the software CombineZ5.3, and finally arranged and partly enhanced with Ulead PhotoImpact X3. Complete views of larger specimens (body size > 10 mm) were arranged with Microsoft Image Composite Editor 1.4.4.

Numerous species which are treated here belong to the large genus *Tenthredo* Linnaeus, 1758, in a broader sense. Many *Tenthredo* species are not placed yet in subgenera (Taeger *et al.* 2010). Wherever possible, the *Tenthredo* species treated here were placed in a subgenus. These placements in subgenera are to be considered only as a technical help for the future reclassification of the genus and are not supported by phylogenetic analysis. In some cases the species are left unplaced.

The records in the list are structured as follows:

- **Original name** with author and year of publication.
- Current placement of the nominal taxon, and if necessary the reference to its synonymy.
- Data of **Types**: *Original name* and reference. Original type status, number and sex of types, type locality as given in the original description. Information about the primary type, if necessary including reference to lectotype designation. Type locality according to the labels, including country and if changed, current name of the locality. Information on secondary types.

- **Discussion.**

The sections on the nominal taxa are sorted in alphabetical order of the species-group name. The types in the Entomology collection of the MNCN bear two different numbers: “MNCN Cat. Tipos N°...” identifies with one number all specimens of a type series housed in the MNCN. “MNCN\_Ent ...” is the individual number for each specimen.

In the MNCN collection are housed some types of species described by René Malaise, which are labeled as paratypes. Malaise’s type specimens are usually labeled “Typus”, “Paratypus” or “Allotypus”. On the other hand, in the original descriptions frequently no type designation was made by Malaise, or such designations are not clear. In these cases the specimens labeled “Paratypus” are considered to be syntypes. Unfortunately, the whereabouts of many syntypes are unknown. Such specimens are already known from several museums. Where appropriate, lectotypes should be selected from the specimens left in the Malaise collection (NHRS).

#### Abbreviations:

BMNH	The Natural History Museum, London, United Kingdom
MNCN	Museo Nacional de Ciencias Naturales, Madrid, Spain
NHMW	Naturhistorisches Museum Wien, Austria
NHRS	Naturhistoriska riksmuseet, Stockholm, Sweden
RFT	coll. R. Forsius, Åbo Akademi, Turku, Finland
SDEI	Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany
ZSM	Zoologische Staatssammlung, München, Germany

## Results

### *Tenthredo acutiscutis* Konow, 1908

A valid species, *Tenthredo* (*Olivacedo*) *acutiscutis* Konow, 1908.



**FIGURE 5.** *Tenthredo acutiscutis*, lectotype ♀. a. dorsal, scale 5 mm; b. head and thorax dorsal; c. head and thorax lateral; d. lateral; e. face; f. labels.



**Types.** *Tenthredo acutiscutis* Konow, 1908: 22. Syntypes ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100183, MNCN Cat. Tipos N° 8119, Fig. 05, see also <http://dx.doi.org/10.6084/m9.figshare.746991>). Type locality: India, Sikkim. Paralectotype ♀, same data as lectotype (SDEI, <http://dx.doi.org/10.6084/m9.figshare.775349>).

**Discussion.** Konow had more than one syntype to hand (he gave a body size range). Malaise (1945: 237, plate XV) considered the syntype in the SDEI to be a paratype, and labeled it accordingly. Saini also examined this specimen, and supposed the holotype and a paratype to be in the SDEI (Saini 2007). The apex of the abdomen of the paralectotype is missing. This species, hitherto unplaced within *Tenthredo*, belongs to the subgenus *Olivacedo* Zhelochovtsev, 1988.

### *Tenthredo aericeps* Konow, 1907

A valid species, *Tenthredo aericeps* Konow, 1907.

**Type.** *Tenthredo aericeps* Konow, 1907b: 173–174. Syntype(s) ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100187, MNCN Cat. Tipos N° 8120, Fig. 06, see also <http://dx.doi.org/10.6084/m9.figshare.746972>). Type locality: India, Sikkim.

**Discussion.** The description of the species gives no information about the number of the types. Possibly the lectotype was the only syntype.



**FIGURE 6.** *Tenthredo aericeps*, lectotype ♀. a. dorsal, scale 5 mm; b. head and thorax dorsal; c. head and thorax lateral; d. face; e. hind claw; f. labels.

### *Sterictophora* (sic!) *afra* Pasteels, 1963

A valid species, *Sterictophora afra* Pasteels, 1963.

**Type.** *Sterictophora afra* Pasteels, 1963: 540–541. Holotype ♂, “Cameroun 1898” (MNCN\_Ent 82309, MNCN Cat. Tipos N° 2264, see <http://dx.doi.org/10.6084/m9.figshare.746940>). Type locality: Cameroon (“Kamerun”).

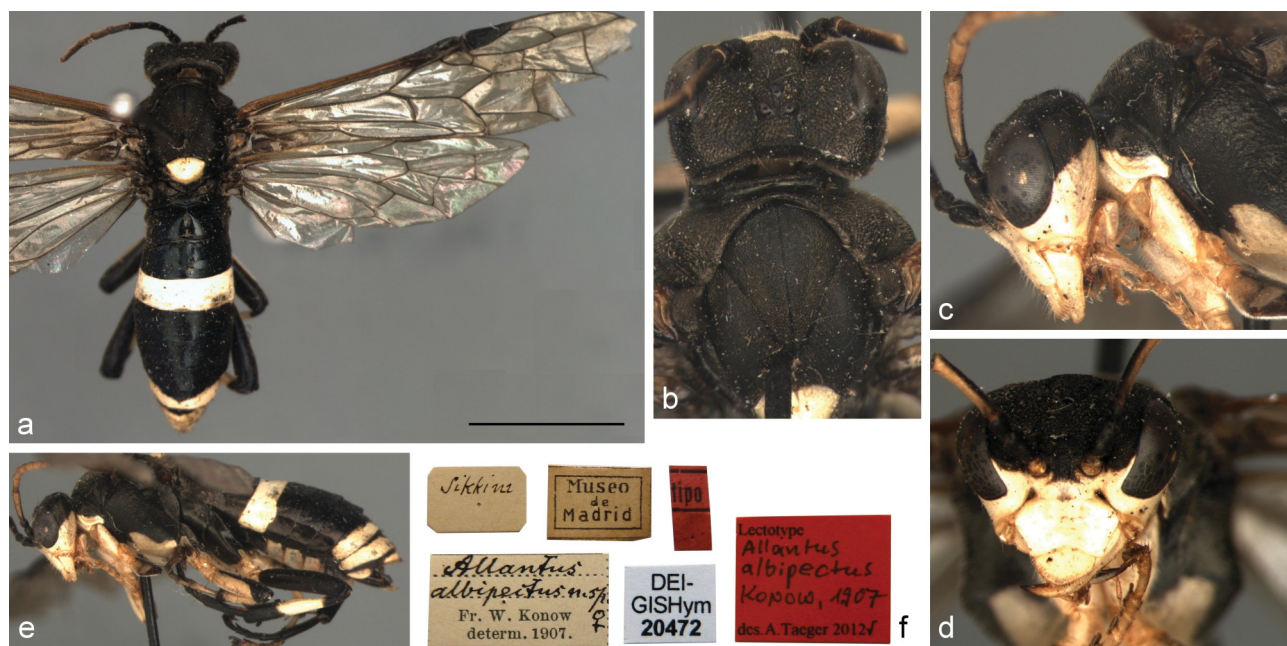


## *Allantus albipectus* Konow, 1907

A junior subjective synonym of *Tenthredo* (*Temuledo*) *felderi* (Radoszkowsky, 1871), synonymy by Malaise (1945: 261).

**Types.** *Allantus albipectus* Konow, 1907b: 167–168. Syntypes ♀, “Sikkim”. Lectotype ♀, hereby designated, (MNCN\_Ent 100239, MNCN Cat. Tipos N° 8121, Fig. 07, see also <http://dx.doi.org/10.6084/m9.figshare.751571>). Type locality: India, Sikkim. Paralectotype ♀, same data as lectotype (SDEI, <http://dx.doi.org/10.6084/m9.figshare.779708>).

**Discussion.** According to Saini (2007: 115) the (assumed) holotype is housed in the SDEI (“IPAL Eberswalde”). However, Konow (1907b: 165) noted under *Sciopteryx galerita*: “Die Typen dieser wie aller folgenden Arten befinden sich im Naturhist. National-Museum in Madrid.” [translated: ‘The types of this and all following species are housed in the Natural History National Museum in Madrid.’].



**FIGURE 7.** *Allantus albipectus*, lectotype ♀. a. dorsal, scale 5 mm; b. head and thorax dorsal; c. head and thorax lateral; d. face; e. lateral; f. labels.

## *Tenthredo allantosikkimensis* Haris, 2004

A valid species, *Tenthredo allantosikkimensis* Haris, 2004.

**Types.** *Tenthredo allantosikkimensis* Haris, 2004a: 158. Holotype ♀, “Sikkim” (MNCN\_Ent 100188, MNCN Cat. Tipos N° 9887, see <http://dx.doi.org/10.6084/m9.figshare.746954>). Type locality: India, Sikkim.

## *Tenthredo angustiannulata* Malaise, 1945

A valid species, *Tenthredo angustiannulata* Malaise, 1945.

**Types.** *Tenthredo angustiannulata* Malaise, 1945: 204. Syntypes, 14 ♀, “Burma-Yunnan frontier; Burma (Chin Hills, Mt. Victoria at 2400–2800 m.); Sikkim (Darjiling)”. Type locality. Myanmar: Kachin State: Kambaiti (ca. 25.399°N, 98.118°E). Syntype ♀, Kambaiti (MNCN\_Ent 100261, MNCN Cat. Tipos N° 8122, <http://dx.doi.org/10.6084/m9.figshare.850209>).

**Discussion.** The MNCN specimen will be selected as paralectotype in the results of a study of Malaise’s types (Taeger & Vårdal, in prep.). Other syntypes are known from the NHRS, SDEI, and the Naturkundemuseum Berlin.

### *Allantus asperatus* Konow 1906

A valid species, *Tenthredo* (*Tenthredo*) *asperata* (Konow, 1906).

**Types.** *Allantus asperatus* Konow, 1906: 125. Syntypes ♀, “Sikkim”. Lectotype ♀ (SDEI, <http://dx.doi.org/10.6084/m9.figshare.746957>) designated by Taeger (1985: 139). Type locality: India, Sikkim. Paralectotype: ♀ (MNCN\_Ent 100189, MNCN Cat. Tipos N° 2486), same data as the lectotype.

**Discussion.** There are about 80 specimens of this species in the MNCN, partly labeled “Sikkim”, partly without any label (most likely all from the same locality). Very likely these specimens are not former syntypes. Konow mentioned a body size of 10–11 mm; the specimens in the MNCN vary between 7.5 and 10.5 mm. Only one ♀ labeled as *asperatus* by Konow is considered by us to be a paralectotype (MNCN\_Ent 100189). The male of the species is unknown.

### *Siobla atra* Malaise, 1945

A valid species *Siobla atra* Malaise, 1945.

**Types.** *Siobla atra* Malaise, 1945: 123. Syntypes 40 ♂, 15 ♀, “Burma - Yunnan frontier, 1800–2000 m. Type locality: Kambaiti.”. Lectotype ♀ (“N. E. BURMA, Kambaiti, 7000ft”, NHRS), designated by Niu & Wei (2013). Paralectotypes from the same locality in various collections. In MNCN 1♀ (MNCN\_Ent 100259, MNCN Cat. Tipos N° 8123), 1♂ (MNCN\_Ent 100260, MNCN Cat. Tipos N° 8123).

**Discussion.** The male paralectotype belongs to *Siobla semipicta* Malaise, 1945. The real male of *S. atra* was described by Malaise (1945) as *Siobla rufipes* (see below).

### *Netroceros bellicornis* Konow, 1907

A valid species, *Neacidiophora bellicornis* (Konow, 1907).

**Types.** *Netroceros bellicornis* Konow, 1907a: 495. Syntype(s) “Africa occ. (Kamerun)”. Lectotype ♂ (SDEI, <http://dx.doi.org/10.6084/m9.figshare.779797>) designated by Koch (1998). Type locality: “Kamerun” (= Cameroon). Paralectotype ♂ (MNCN\_Ent 100190, MNCN Cat. Tipos N° 12142, <http://dx.doi.org/10.6084/m9.figshare.746961>), same data as the lectotype.

**Discussion.** Koch (1998) assumed a “Holotypus”. According to Art. 74.6. ICZN, he thus selected a lectotype, as it is not clear from the original description if Konow had more than one syntype.

### *Athalia bolivari* Dusmet, 1896

A junior subjective synonym of *Athalia circularis circularis* (Klug, 1815), synonymy by Benson (1962).

**Types.** *Athalia Bolivari* (sic!) Dusmet, 1896: 146. Syntype(s) ♂, “Coruña” Lectotype, ♂, hereby designated (MNCN\_Ent 82342, MNCN Cat. Tipos N° 2268, Fig. 08, see also <http://dx.doi.org/10.6084/m9.figshare.746925>). Type locality: Spain: Coruña.

**Discussion.** Benson (1962: 365) synonymized *A. bolivari* with *A. circularis*. Fitton (1978: IV 5) listed the taxon as valid. Most likely the name was simply wrong formatted and should appear in this paper under *circularis* as a synonym. Aksoy *et al.* (1998) mentioned without further explanation larvae of *A. bolivari* on *Capsella bursa-pastoris*. The systematics of *Athalia* require further investigation. It is not unlikely that several species are currently confused under the name *circularis*. The type specimen is obviously a melanistic specimen. It is not quite clear if the type locality concerns the city itself, or the province A Coruña.

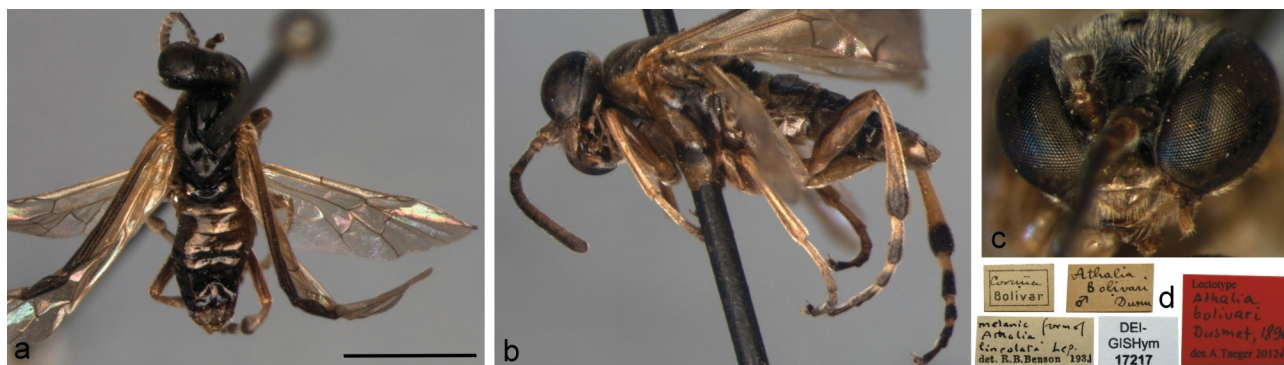


FIGURE 8. *Athalia bolivari*, lectotype ♂. a. dorsal, scale 2 mm; b. lateral; c. face; d. labels.

### *Periclista bumasta* Konow, 1907

A valid species, *Malkiatius bumastus* (Konow, 1907).

**Type.** *Periclista bumasta* Konow, 1907a: 493. Holotype ♀, “Sikkim”. (MNCN\_Ent 100191, MNCN Cat. Tipos N° 8124, see <http://dx.doi.org/10.6084/m9.figshare.754524>). Type locality: India, Sikkim.

**Discussion.** Smith (2006) designated the type specimen as lectotype. Konow (1907a: 493) noted “Die Type befindet sich im Madrider Museum.” [translated: ‘The type is located in the Museum in Madrid’]. This is a clear indication that he had only one specimen in his hands.

### *Netroceros calo* Konow, 1907

A valid species, *Neacidiophora calo* (Konow, 1907).

**Types.** *Netroceros calo* Konow 1907a: 496. Syntype(s) ♀, “Africa occ. (Kamerun)”. Lectotype ♀ designated by Koch (1998) (MNCN\_Ent 100192, MNCN Cat. Tipos N° 12141, see <http://dx.doi.org/10.6084/m9.figshare.754538>). Type locality: Cameroon (“Kamerun”).

**Discussion.** Koch (1998) assumed a “Holotypus”. According to Art. 74.6. ICZN, he thus selected a lectotype, as it is not clear from the original description if Konow had more than one syntype.

### *Tristactus punctatus* var. *candidatus* Konow, 1899

A junior subjective synonym of *Megalodontes judaicus* (Lepeletier, 1823), synonymy by Taeger, 1998: 191.

**Types.** *Tristactus punctatus* var. *candidatus* Konow, 1899: 204. Syntype(s) ♀, “in Asia minore prope ab Akbes urbe”. Lectotype ♀ hereby designated (MNCN\_Ent 81534, MNCN Cat. Tipos N° 8125, Fig. 09, see also <http://dx.doi.org/10.6084/m9.figshare.754590>). Type locality: Turkey: Hatay: Akbes (36.857°N, 36.518°E; “Akbés”).

**Discussion.** All taxa formerly treated as species of *Tristactus* Konow, 1897, are currently considered to belong to *Megalodontes judaicus*. The var. *candidatus* is a very pale form that was collected together with darker specimens. Benson (1968: 115) synonymized *T. punctatus* Konow, 1898 with *judaicus*. Without comment, Taeger (1998) listed *T. punctatus* var. *candidatus* as a synonym of *judaicus*.





FIGURE 9. *Tristactus punctatus* var. *candidatus*, lectotype ♀. a. dorsal, scale 2 mm; b. lateral; c. face; e. labels.

### *Tenthredo capistrata* Konow, 1907

A valid species, *Tenthredo capistrata* Konow, 1907.

**Type.** *Tenthredo capistrata* Konow, 1907b: 171–172. Syntypes ♂ ♀, “Sikkim”. Lectotype ♀, hereby designated, (MNCN\_Ent 100193, MNCN Cat. Tipos N° 8126, Fig. 10, see also <http://dx.doi.org/10.6084/m9.figshare.755973>). Type locality: India, Sikkim. Paralectotype: ♂? (SDEI, see <http://dx.doi.org/10.6084/m9.figshare.787732>, without abdomen), same data as the lectotype.



FIGURE 10. *Tenthredo capistrata*, lectotype ♀. a. dorsal, scale 2 mm; b. lateral; c. face; d. head and thorax lateral; e. head and thorax dorsal; f. labels.

**Discussion.** Saini (2007: 107) mentioned a ♀ holotype and two paratypes (♂, ♀) in the SDEI (“IPAL, Eberswalde”). According to the original description, the types of *capistrata* are syntypes. Furthermore, the existence of three specimens in the SDEI was a speculation. Oehlke & Wudowenz (1984) already noted in the SDEI only a single, damaged syntype without abdomen. Saini (2007: 31) noted that the males and females of the



species are very differently colored. On the other hand, Konow (1907b) did not mention such a difference, but a slightly different shape of the head. It seems to be possible, that Konow had only the well preserved female (now lectotype) and a male without abdomen (now paralectotype) for the description.

### *Megalodontes capitalatus* Konow, 1904

A valid species, *Megalodontes capitalatus* Konow, 1904.

**Types.** *Megalodontes capitalatus* Konow, 1904: 227–228. Syntypes ♂ ♀, “Hispania (Aranjuez)”. Lectotype ♂, hereby designated (SDEI, Fig. 11, see also <http://dx.doi.org/10.6084/m9.figshare.817915>). Type locality: Spain: Madrid: Aranjuez (40.028°N, 3.604°W, “Aranjuéz”). Paralectotype ♀ (MNCN\_Ent 81533, MNCN Cat. Tipos N° 2260, <http://dx.doi.org/10.6084/m9.figshare.850195>, same data as the lectotype).

**Discussion.** The male syntype from the SDEI collection is selected as lectotype, as it was examined by previous workers and used to interpret the species.



**FIGURE 11.** *Megalodontes capitalatus*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. head and thorax lateral; d. head and thorax dorsal; e. antenna; f. face; g. labels.

### *Tenthredopsis carinatus* Malaise, 1931

A valid species, *Tenthredopsis carinata* Malaise, 1931.

**Types.** *Tenthredopsis carinatus* Malaise, 1931:9 10. Syntypes, 30 ♂, 30 ♀, Petropawlowsk, Klutchi, Elisowo. Type localities: Russia: Kamtchatka: Petropawlowsk, Klutchi, Elisowo. Syntypes. 1♂, 1♀ “Kamtschatka” (♀ MNCN\_Ent 82400, <http://dx.doi.org/10.6084/m9.figshare.850189>, ♂ MNCN\_Ent 82401, MNCN Cat. Tipos N° 2271).

**Discussion.** Malaise distributed syntypes of *T. carinatus* to several museums. The specimens are labeled as paratypes, but according to the description they are syntypes. The lectotype should be selected from the remaining specimens in the NHRS collection.

## *Tenthredo casta* Konow, 1908

A valid species, *Tenthredo* (*Olivacedo*) *casta* Konow, 1908.

**Types.** *Tenthredo casta* Konow, 1908: 22–23. Syntypes ♂ ♀, “Sikkim”. Lectotype ♀, hereby designated, (MNCN\_Ent 82485, MNCN Cat. Tipos N° 8127, Fig. 12, see also <http://dx.doi.org/10.6084/m9.figshare.756022>). Type locality: India, Sikkim.

**Discussion.** The other syntype(s) seem to be lost. In the SDEI only an original label attached to a pin could be found. Papers subsequent to the original description obviously always refer to the original description only. Saini (2007: 107) mentioned a ♀ holotype and a ♂ paratype in the SDEI (“IPAL, Eberswalde”). Such material does not exist. The species, hitherto unplaced within *Tenthredo*, belongs to the subgenus *Olivacedo* Zhelochovtsev, 1988.



**FIGURE 12.** *Tenthredo casta*, lectotype ♀. a. dorsal, scale 2 mm; b. lateral; c. head dorsal; d. face; e. labels.

## *Tenthredo celtica* Benson, 1953

A junior subjective synonym of *Tenthredo* (*Temuledo*) *temula* Scopoli, 1763.

**Types.** *Tenthredo celtica* Benson, 1953: 275–277. Holotype ♀ : England: Hertfordshire, Tring (BMNH, not examined). Paratypes from Great Britain, Ireland, Italy, and Spain. Paratype in MNCN: 1 ♀ from Vilatorra (MNCN\_Ent 100256, MNCN Cat. Tipos N° 2488).

## *Clydostomus cestatus* Konow, 1908

A valid species, *Tenthredo cestata* (Konow, 1908).

**Types.** *Clydostomus cestatus* Konow, 1908: 20. Syntypes ♂ ♀, “Sikkim”. Lectotype ♀, hereby designated, (MNCN\_Ent 82480, MNCN Cat. Tipos N° 8128, Fig. 13, see also <http://dx.doi.org/10.6084/m9.figshare.756207>). Type locality: India, Sikkim. Paralectotypes: 1 ♂ (MNCN\_Ent 82481, MNCN Cat. Tipos N° 8128, <http://dx.doi.org/10.6084/m9.figshare.757297>), 1 ♀ (NHRS), 1 ♂ (? without abdomen, SDEI), all labeled “Sikkim”.

**Discussion.** The taxon is the type species of *Clydostomus* Konow, 1908. Malaise (1945) synonymized it with *Tenthredo*, and, based on the tridentate clypeus, within this genus with *Fethalia* Cameron, 1902 (type species *T. opposita*, see also discussion under *inguinalis*). But because of its rather different appearance it seems unlikely that *cestatus* is closely related to the group of *T. opposita*. In the course of a future reclassification of *Tenthredo* s.l., *Clydostomus* (which is older than Rohwer’s, Malaise’s, and Zhelochovtsev’s genus group names in *Tenthredo* s.l.) might be used again. Currently, the species is not placed in a subgenus. See also under *Clydostomus merceti*.





**FIGURE 13.** *Clydostomus cestatus*, lectotype ♀. a. dorsal; b. lateral, scale 5 mm; c. head and thorax dorsal; d. head and thorax lateral; e. face; f. labels.

### *Miocephala chalybea* Konow, 1907

A valid species, *Arge chalybea* (Konow, 1907).

**Types.** *Miocephala chalybea* Konow, 1907b:163. Syntypes ♂ ♀, “Sikkim”. Lectotype ♂, hereby designated (SDEI, Fig. 14, see also <http://dx.doi.org/10.6084/m9.figshare.757697>). Type locality: India, Sikkim. Paralectotype: ♀ (MNCN\_Ent 100240, MNCN Cat. Tipos N° 8129, Fig. 15, see also <http://dx.doi.org/10.6084/m9.figshare.757694>).

**Discussion.** *Miocephala chalybea* is the type species of *Miocephala* Konow, 1907, which is treated today as a synonym of *Arge* Schrank, 1802. Already its original description by Konow (1907b) caused some confusion. Both sexes of the taxon were described, but he mentioned only for the female: “Die weibliche Type ist Eigentum des National-Museums in Madrid” [translated: ‘The female type is property of the National Museum in Madrid’]. The deposition of the male type(s) was not mentioned, and therefore it is to be expected in Konow’s collection (today at SDEI). Konow’s note about the female type cannot be interpreted as a designation of a holotype. A male labeled by Konow is housed in the SDEI collection, and this specimen seems to be the only specimen of the species that was examined by subsequent authors (Malaise 1937a: “the type... *Miocephala chalybea* Knw ♂”; Oehlke & Wudowenz 1984: “1 ♂, Syntypus”; Saini & Thind 1995: “Holotype, Coll. Konow ...♂”). Furthermore, Saini & Thind (1995) claimed that the female of the species is unknown. All other mentions of *chalybea* seem to be based not on examined material, but on the papers cited above. Konow’s redescription (Konow 1907e) is a translation of the Latin original description into German.

There are some discrepancies between the description and the available material. These concern primarily the coloration of the hind tibiae, that should be yellow (“tibiis posticis flavis”), and the body color, that should be black-blue (“nigro-coerulea”). In the male specimen the hind tibiae are very dark brown to black, and the thorax dorsally has a strong greenish tinge. On the other hand there is no doubt that the specimen is one of the syntypes, and Konow’s description regarding the male is inaccurate. The question, if the two specimens are conspecific or not, must be left unanswered. It seems not unlikely that they represent the same species, but more specimens are needed to prove this assumption. As all subsequent papers about the status of *Miocephala* and *chalybea* are based on the male, this specimen was selected as lectotype, even if the description of the species does not completely fit the type specimen.



**FIGURE 14.** *Miocephala chalybea*, lectotype ♂. a. dorsal, scale 2 mm; b. lateral; c. head and thorax dorsal; d. face; e. labels.



**FIGURE 15.** *Miocephala chalybea*, paralectotype ♀. a. dorsal, scale 2 mm; b. ventral; c. face; d. head dorsal; e. labels.

### *Arge chrysostoma* Pasteels, 1963

A valid species, *Arge chrysostoma* Pasteels, 1963.

**Type.** *Arge chrysostoma* Pasteels, 1963: 548–549. Holotype ♀, “Lourenço Marques”. Type locality: Mozambique: Maputo (“Lourenço Marques”). The type specimen is in good condition (MNCN\_Ent 82307, MNCN Cat. Tipos N° 2263, see <http://dx.doi.org/10.6084/m9.figshare.757715>).

### *Arge congrua* Konow, 1907

A valid species, *Arge congrua* Konow, 1907.

**Type.** *Arge congrua* Konow, 1907c: 309. Holotype ♀, “Africa occ. (Kamerun)”. Type locality: Cameroon (“Kamerun”). The type specimen is in good condition (MNCN\_Ent 82310, MNCN Cat. Tipos N° 12143, see <http://dx.doi.org/10.6084/m9.figshare.757716>).



## *Athalia cornubiae* Benson, 1931

A valid species, *Athalia cornubiae* Benson, 1931

**Types.** *Athalia (Athalia) cornubiae* Benson, 1931: 110. Holotype ♀, England, Cornwall, Looe (BMNH, not examined). Paratypes from France, Italy, and Spain. Paratypes in MNCN: 1 ♀ from Covadonga (MNCN\_Ent 82338), 1 ♀ from Villaverde (MNCN\_Ent 82339) both MNCN Cat. Tipos N° 2267.

## *Peus cupreiceps* Konow, 1907

A valid species, *Tenthredo (Metallopeus) cupreiceps* (Konow, 1907), **comb. nov., spec. rev.**

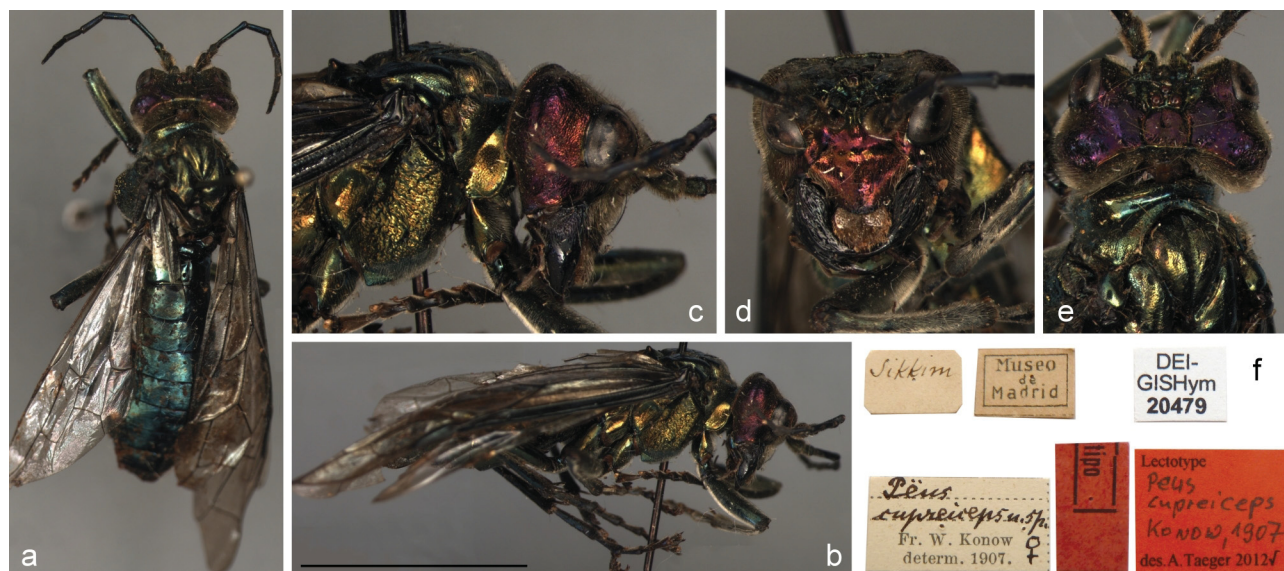
= *Metallopeus cupreolus* Malaise, 1945, **syn. nov.**

= *Metallopeus inermis* Malaise, 1945, **syn. nov.**

**Types.** *Peus cupreiceps* Konow, 1907b: 170. Syntypes ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100241, MNCN Cat. Tipos N° 8130, Fig. 16, see also <http://dx.doi.org/10.6084/m9.figshare.757717>). Type locality: India: Sikkim.

*Metallopeus cupreolus* Malaise, 1945: 185, plate IXe. Syntypes 1 ♂, 6 ♀ “Tibet (Gyangtse); North Burma (Adung Valley); Szechuan (Lunanfu); 3–4000 m”. Lectotype ♀, hereby designated (NHRS, Fig. 17, see also <http://dx.doi.org/10.6084/m9.figshare.757719>). Type locality: China: Szechuan: Long'an (ca. 32.41°N, 104.53°E, “Tatzaopin (Lunanfu)”). Paralectotypes: 1 ♀ Adung valley, 12000 ft 31.8.1931 (Myanmar: Kachin State, near Adunglong, ca. 28.2°N, 97.7°E); 1 ♀ Gyangtse, 12000 ft., 18.06.1905 (China: Xizang: Gyangtse, 28.95°N, 89.63°E (both NHRS). The whereabouts of the remaining paralectotypes (1 ♂, 3 ♀) are unknown.

*Metallopeus inermis* Malaise, 1945: 184, plate IXd. Holotype ♀, “Tibet, 4000 m. Type locality: Gyangtse” (BMNH, not examined). Type locality: China: Xizang: Gyangtse, 28.95°N, 89.63°E. Paratypes: 2 ♀ same locality (NHRS, Fig. 18, see also <http://dx.doi.org/10.6084/m9.figshare.757722>).



**FIGURE 16.** *Peus cupreiceps*, lectotype ♀. a. dorsal; b. lateral, scale 10 mm; c. head and thorax lateral; d. face; e. head and thorax dorsal; f. labels.

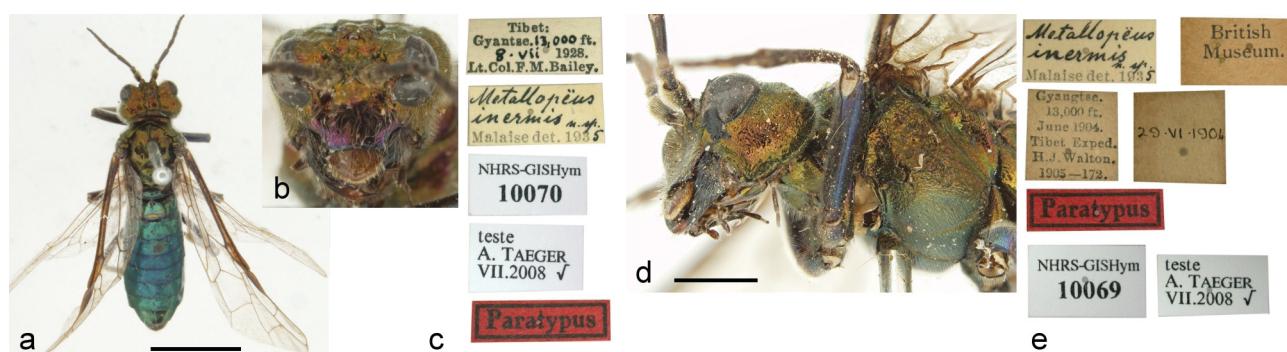
**Discussion.** Konow’s description of *cupreiceps* contains no evidence that he had more than one specimen of the species to hand. Malaise (1945: 186) synonymized it with *M. splendidus* Konow (see below): “(1 ♀, compared with both paratypes, kindly sent from Berlin and Madrid respectively).” The first author has seen these two “paratypes” in the NHRS, one labeled *splendidus* (<http://dx.doi.org/10.6084/m9.figshare.773063>), the other *cupreiceps* (<http://dx.doi.org/10.6084/m9.figshare.773064>). Both specimens belong to *splendidus* as noted by



Malaise (*Tenthredo splendida*, Fig. 37 see below). On the other hand it is evident that both specimens were labeled subsequently by Dusmet, and not originally by Konow. It may be assumed that Dusmet mixed up the specimens of the taxa. Konow's description of *cupreiceps* is quite clear, as he describes the color of the head as coppery (and he derived the species name from this), whereas *splendidus* has a metallic green head. Malaise's *cupreolus* agrees very well with the type specimen of *cupreiceps* labeled by Konow (lectotype, MNCN), and therefore it is considered to be its junior synonym. Furthermore, Malaise described *M. inermis*, based on missing "mesosternal thorns". Otherwise, this taxon agrees with *cupreiceps*, and is known from the same locality (Gyangtse) as *cupreiceps*. There seem to be no further records of *inermis*. Saini (2007) recorded *inermis* for India, but characterized it as a species with (!) mesosternal thorns. His description fits normal *cupreiceps*. Morphological characters like the shape of the occipital carina, or the size of the tubercle in front of the front ocellus, seems to be rather variable in the group. The mesoscutellum of *cupreiceps* is slightly to very strongly pointed in the middle, in *inermis* nearly rounded. Variability in development of mesepisternal thorns is known to occur in other Palearctic species of *Tenthredo*, e.g., *T. trunca* Konow, 1908 (Malaise 1945), or *T. caucasica* Eversmann, 1847 (Taeger 1985). It might be, that the reduction of the thorns is connected somehow to the body size, the *inermis* (para-)types are only about 13–14 mm long, the *cupreolus* types 14–15 mm, and the *cupreiceps* lectotype nearly 19 mm. We suppose that *inermis* falls within the variability range of *cupreiceps*, and therefore consider it as its junior synonym.



**FIGURE 17.** *Metallopeus cupreolus*, lectotype ♀. a. dorsal, scale 5 mm; b. head and antennae dorsal; c. head and thorax ventrolateral; d. face; e. labels.



**FIGURE 18.** *Metallopeus inermis*, paratypes ♀. a. dorsal, scale 5 mm; b. face; c. labels; d. head and thorax ventrolateral; e. labels.

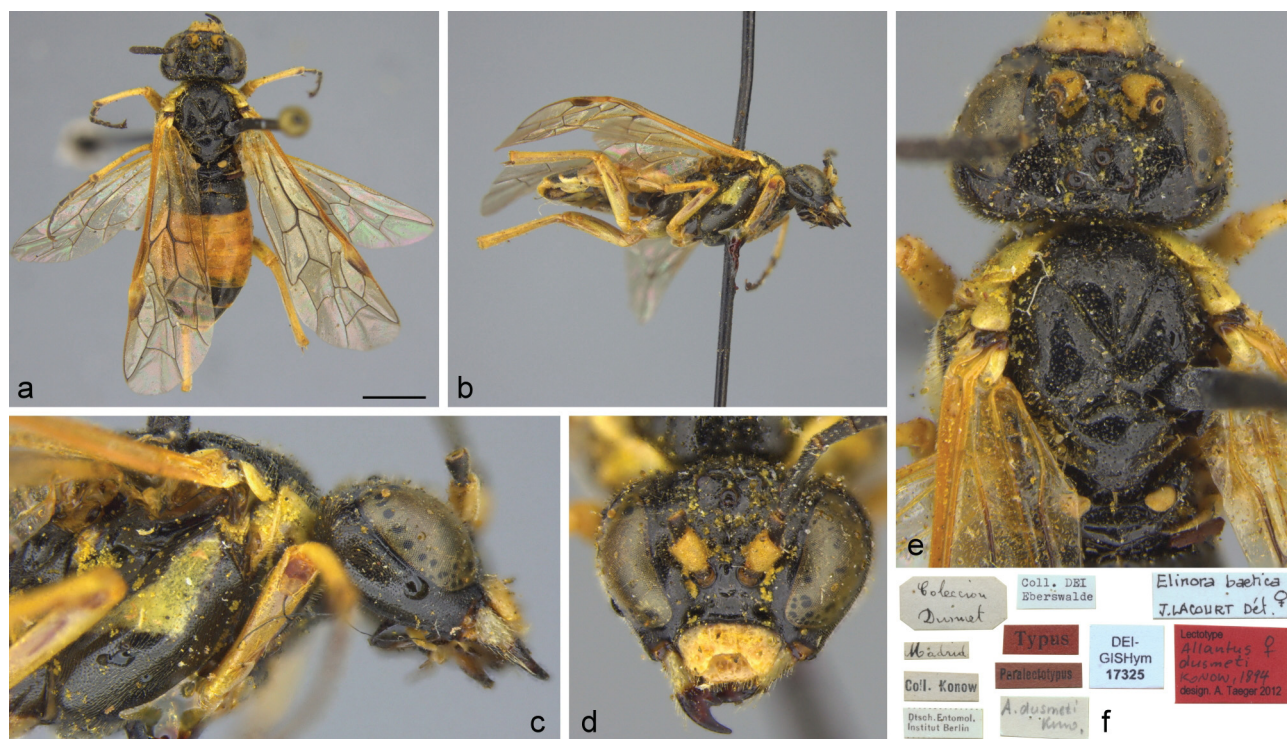
### *Allantus dusmeti* Konow, 1894

A junior subjective synonym of *Tenthredo* (*Elinora*) *baetica* Spinola, 1843, synonymy with *Elinora baetica* by Benson (1968: 183).

**Types.** *Allantus Dusmeti* [sic!] Konow, 1894a: 96. Syntypes ♂ ♀ "Hispania [...] Madrid und bei Rivas". Lectotype ♀ hereby designated (SDEI, Fig. 19, see also <http://dx.doi.org/10.6084/m9.figshare.821216>) Type locality: Spain:

Madrid. Paralectotypes: 1 ♀ (MNCN\_Ent 82398), 1 ♂ (MNCN\_Ent 82399, <http://dx.doi.org/10.6084/m9.figshare.850213>) both from Rivas, leg. Dusmet, 14–5–[18]93, MNCN Cat. Tipos N° 2270.

**Discussion.** Benson (1968: 183) designated a lectotype from the SDEI collection (see <http://dx.doi.org/10.6084/m9.figshare.816890>). According to the reverse of the data label, this specimen was collected on 14-5-[190]2. Therefore, Benson's designation is invalid. Benson's systematic placement as a synonym of the highly variable *Tenthredo baetica* seems to be correct. Currently, it is considered to belong to the Iberian nominotypical subspecies (Taeger *et al.* 2010). The status of the more widely distributed subspecies *Tenthredo (Elinora) baetica dominiquei* (Konow, 1894b) is doubtful because of the overlapping distribution areas. It is not unlikely that *dominiquei* is a synonym of *baetica*, and that in this case subspecies cannot be separated.



**FIGURE 19.** *Allantus dusmeti*, lectotype ♀. a. dorsal, scale 2 mm; b. lateral; c. head and thorax lateral; d. face; e. head and thorax dorsal; f. labels.

### *Amasis dusmeti* Konow, 1905

A valid species, *Corynis dusmeti* (Konow, 1905).

**Types.** *Amasis dusmeti* Konow, 1905a: 242–243. Syntypes ♂ ♀, “Hispania et Algeria”. The lectotype (Spain: Ciudad Real: Pozuelo de Calatrava) will be selected from material in the SDEI in the course of the revision of the genus (Jacobs *et al.*, in prep.). The two syntypes (♂, ♀) of the MNCN (Pozuelo de Calatrava, ♂ MNCN\_Ent 82336, ♀ MNCN\_Ent 82337, MNCN Cat. Tipos N° 2266) will become paralectotypes (see <http://dx.doi.org/10.6084/m9.figshare.757802>).

**Discussion.** Syntypes from Algeria were found neither in MNCN nor in SDEI.

### *Megalodontes dusmeti* Enslin, 1914

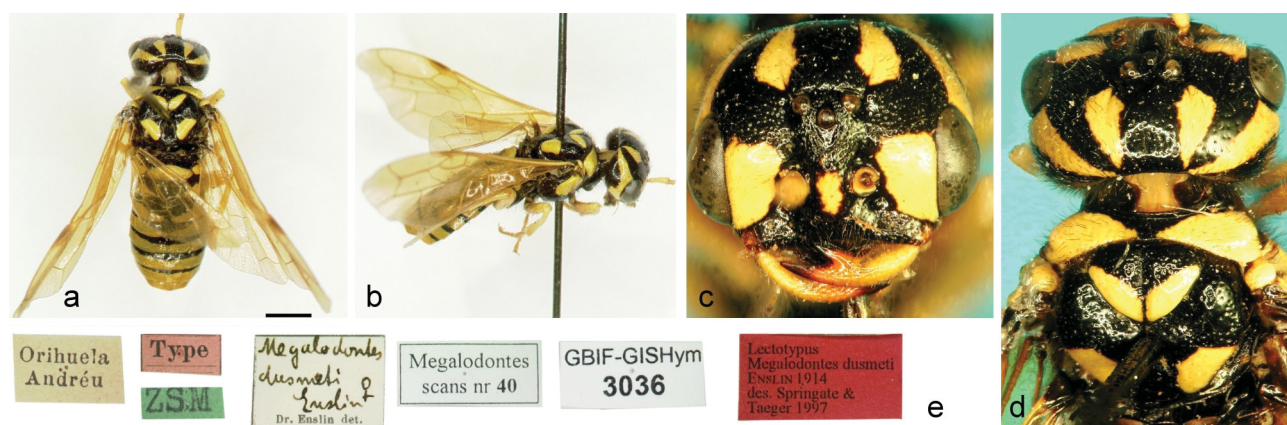
A valid species, *Megalodontes dusmeti* Enslin, 1914.

**Types.** *Megalodontes dusmeti* Enslin, 1914: 170. Syntypes ♀, “Spanien: Valencia, Orihuela.”. Lectotype ♀, hereby designated, (Fig. 20, see also <http://dx.doi.org/10.6084/m9.figshare.757868>, ZSM). Type locality: Spain: Alicante:



Orihuela. Paralectotype: 1 ♀ “Valencia” (<http://dx.doi.org/10.6084/m9.figshare.757832>, MNCN\_Ent 81539, MNCN Cat. Tipos N° 10089).

**Discussion.** The species belongs to the *phaenicius* complex of *Megalodontes*. Taeger (2002: 465) discussed the validity of the species. Meanwhile, five females are known, and this material supports the validity of the taxon. Apart from the areas around Murcia and Valencia, one female was collected near Madrid (Vaciamadrid).



**FIGURE 20.** *Megalodontes dusmeti*, lectotype ♀. a. dorsal, scale 2 mm; b. lateral; c. face d. head and thorax dorsal; e. labels.

### *Periclista dusmeti* Konow, 1907

A valid species, *Periclista* (*Periclista*) *dusmeti* Konow, 1907.

**Types.** *Periclista Dusmeti* [sic!] Konow, 1907a: 493. Syntypes ♂ ♀, “Pozuolo de Ca la Fuente, (...) Barcelona”. Syntypes: 2 ♂ “Pozuelo de C<sup>A</sup> La Fuente” (MNCN\_Ent 82340, see <http://dx.doi.org/10.6084/m9.figshare.758922>; MNCN\_Ent 82341, both MNCN Cat. Tipos N° 10091); 1 ♂ same data (SDEI); 1 ♀ “Barcelona” (SDEI).

**Discussion.** The sexes were described from rather distant places: “Herr José Ma Dusmet y Alonso hat das Männchen dieser Art (...) in mehreren Exemplaren bei Pozuolo de Ca la Fuente aufgefunden ; das ♀ besitze ich von Barcelona” [translated: ‘Mr. José Ma Dusmet y Alonso found several specimens of the male of the species near Pozuolo de Ca la Fuente; the female I have from Barcelona’] (Konow 1907a). The correct locality name for the male record is Pozuelo de Calatrava, “La Fuente” is the collector’s name. The lectotype will be selected in the course of a revision of this difficult group (Mol, in prep.).

### *Megalodontes escalerae* Konow, 1899

A valid species, *Megalodontes escalerae* Konow, 1899.

**Types.** *Megalodontes Escalerae* [sic!] Konow, 1899: 203, 205. Syntypes ♂ ♀, “Asia min. (Akbés, Alexandrette)” (on p. 203), “Akbés, Jenidje Kale” (on p. 205). Lectotype ♂, hereby designated (MNCN\_Ent 81535, MNCN Cat. Tipos N° 9184, Fig. 21, see also <http://dx.doi.org/10.6084/m9.figshare.759546>). Type locality: Turkey: Hatay: Akbes (36.857°N, 36.518°E; “Akbés”). Paralectotypes: 1 ♀ 1 ♂ “Jenidje Kale” (♀ MNCN\_Ent 81536, MNCN Cat. Tipos N° 9184; ♂ in SDEI), 2 ♀ “Akbés” (MNCN\_Ent 81537 and 81538, MNCN Cat. Tipos N° 9184).

**Discussion.** There is a contradiction in the type localities given by Konow (see above). No specimen labeled “Alexandrette” could be found, but specimens from Akbés and Jenidje Kale (a place close to Akbes, ca. 36.883°N, 36.467°E). Therefore the locality “Alexandrette” (Iskenderun) may be wrong. There are several similar species in the genus *Megalodontes*. The lectotype from Akbes in eastern Turkey represents a more densely punctured form of the species. The form from western Turkey (e.g., Termessos, 36.982°N, 30.463°E) which is currently considered conspecific, is usually clearly less sculptured.





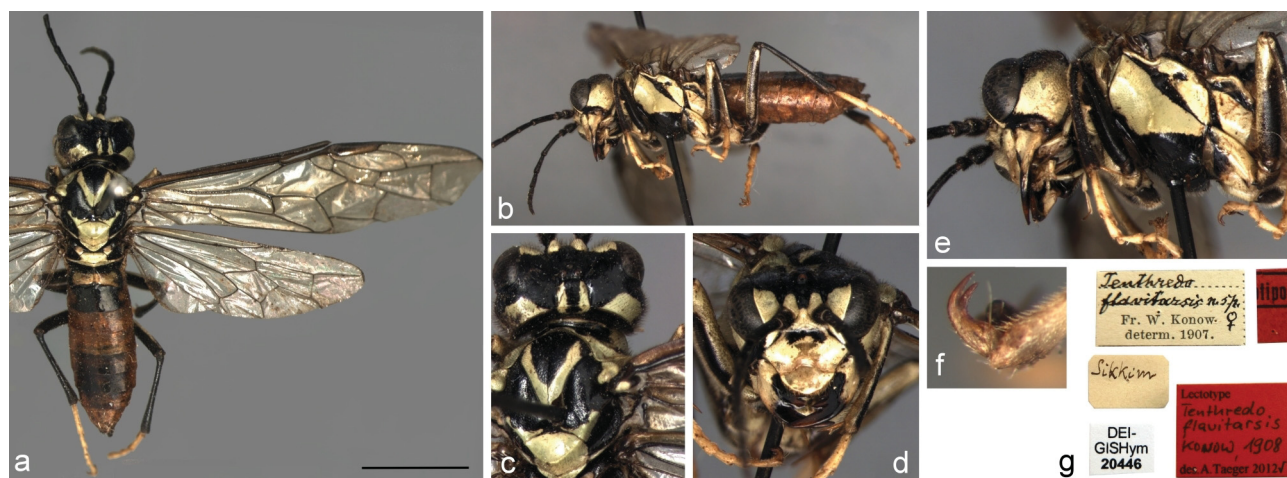
**FIGURE 21.** *Megalodontes escaleraei*, lectotype ♂. a. dorsal, scale 2 mm; b. lateral; c. base of antenna; d. face; e. head and thorax dorsal; f. labels.

### *Tenthredo flavitarsis* Konow, 1908

A valid species, *Tenthredo* (*Olivacedo*) *flavitarsis* Konow, 1908.

**Types.** *Tenthredo flavitarsis* Konow, 1908: 24–25. Syntypes ♀, “Sikkim”. Lectotype ♀, hereby designated, (MNCN\_Ent 100244, MNCN Cat. Tipos N° 8131, Fig. 22, see also <http://dx.doi.org/10.6084/m9.figshare.759619>). Type locality: India, Sikkim. Paralectotype: ♀ (SDEI, <http://dx.doi.org/10.6084/m9.figshare.821267>), “Sikkim”.

**Discussion.** Malaise (1945) considered the paralectotype to be a paratype, Oehlke & Wudowenz (1984) as a questionable holotype, and Saini (2007: 116) implied that the specimen is the holotype. The species, hitherto unplaced within *Tenthredo*, belongs to the subgenus *Olivacedo* Zhelochovtsev, 1988.



**FIGURE 22.** *Tenthredo flavitarsis*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. head and thorax dorsal; d. face; e. head and thorax lateral; g. labels.

### *Amauronematus forsiusi* Enslin, 1915

A junior subjective synonym of *Amauronematus sollemnis* Konow, 1895, synonymy by Lindqvist (1961: 6).

**Types.** *Amauronematus forsiusi* Enslin, 1915: 384–385. Syntypes ♀ “im südlichen Finnland” [‘southern Finland’]. 3 ♀ syntypes MNCN (Finland: “Karislojo”, MNCN\_Ent 82348–82350, see <http://dx.doi.org/10.6084/m9.figshare.850193> and <http://dx.doi.org/10.6084/m9.figshare.850194>, MNCN Cat. Tipos N° 2506). 1 ♀ syntype, ZSM (same data).

**Discussion.** Enslin (1915) mentioned ‘numerous specimens’ reared by Forsius. Further syntypes are to be expected in RFT. A lectotype designation should be made in the course of the revision of this difficult group. The status of *forsiusi* and *sollemnis* is still uncertain.

### *Pristiphora conjugata* var. *forsiusi* Enslin, 1916

A valid species, *Pristiphora forsiusi* Enslin, 1916.

**Types.** *Pristiphora conjugata* var. *forsiusi* Enslin, 1916: 534. Syntypes ♀ [data given for *P. conjugata*:] “im mittleren und nördlichen Europa, auch in Italien” [‘in central and northern Europe, also Italy’]. 1 ♀ syntype MNCN (“Karislojo”, MNCN\_Ent 82346, MNCN Cat. Tipos N° 2507). 1 ♀ syntype, ZSM (same data).

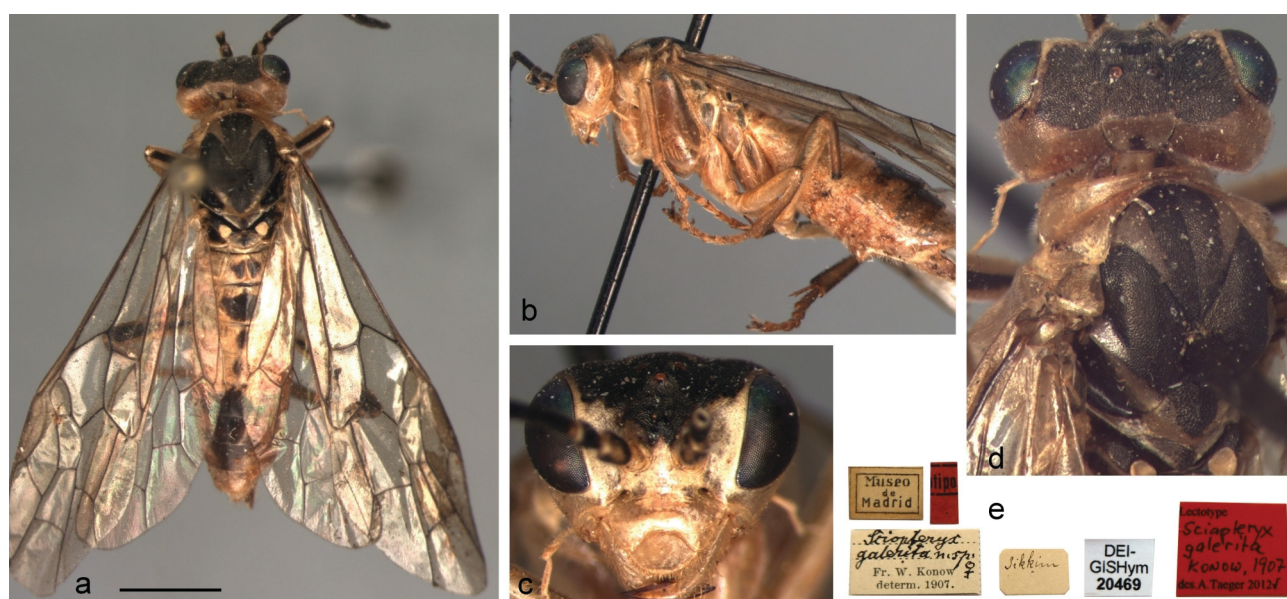
**Discussion.** Further syntypes are to be expected in RFT. A lectotype designation should be made in the course of the revision of this difficult group.

### *Sciopteryx galerita* Konow, 1907

A valid species, *Tenthredo* (*Temuledo*) *galerita* (Konow, 1907).

**Types.** *Sciopteryx* [sic!] *galerita* Konow, 1907b: 164–165. Syntype(s) ♀, “Sikkim”. Lectotype ♀, hereby designated, (MNCN\_Ent 100245, MNCN Cat. Tipos N° 8132, Fig. 23, see also <http://dx.doi.org/10.6084/m9.figshare.779756>). Type locality: India, Sikkim.

**Discussion.** The species was not treated by Malaise (1945). Saini (2007: 11) noted: “For want of detailed account and difficulty in translating, *T. galerita* (Konow) could not be inducted into the key.” Benson (1968: 187) examined the type specimen, and placed it in *Tenthredo*. *Tenthredo galerita* shows similarities with *T. religiosa* Malaise, 1945, and *T. contraria* Malaise, 1945. Currently, it should be placed in the subgenus *Temuledo* Zhelochovtsev, 1988.



**FIGURE 23.** *Sciopteryx galerita*, lectotype ♀. a. dorsal, scale 2 mm; b. lateral; c. face; d. head and antennae dorsal; e. labels.



## *Stromboceros gratiosus* Konow, 1907

A valid species, *Stromboceridea gratiosa* (Konow, 1907).

**Types.** *Stromboceros gratiosus* Konow, 1907a: 497. Holotype ♀, “México”. Type locality. Mexico. MNCN\_Ent 82359, MNCN Cat. Tipos N° 2269 (see <http://dx.doi.org/10.6084/m9.figshare.852133>).

**Discussion.** The Latin description of the species contains an indication that Konow (1907a: 497) had more than one specimen to hand, as he gave a body size range from 8 to 8.5 mm. Furthermore he noted: “Die Type befindet sich im Naturhistorischen Nationalmuseum in Madrid” [translated: ‘The type is housed in the Natural History National Museum in Madrid’]. The latter is clearly a fixation of a holotype (MNCN). The specimen in the SDEI collection, labeled as paralectotype by Smith in 1976 (Oehlke & Wudowenz, 1984) is— if it is considered to be a type specimen—a paratype.

## *Tenthredo habenata* Konow, 1907

A valid species, *Tenthredo habenata* Konow, 1907.



**FIGURE 24.** *Tenthredo habenata*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. head and thorax dorsal; d. head and thorax lateral; e. face; f. labels.

**Types.** *Tenthredo habenata* Konow, 1907b: 172–173. Syntypes ♀, “Sikkim”. Lectotype ♀, hereby designated, (MNCN\_Ent 100195 MNCN Cat. Tipos N° 8133, Fig. 24, see also <http://dx.doi.org/10.6084/m9.figshare.759628>). Type locality: India, Sikkim. Paralectotype: ♀ (SDEI, <http://dx.doi.org/10.6084/m9.figshare.759631>), “Sikkim”.

**Discussion.** Oehlke & Wudowenz (1984) considered the paralectotype to be a questionable holotype, and Saini (2007: 116) implied that the specimen is the holotype. The two examined type specimens look rather different in coloration. The lectotype has the abdominal tergites mainly pale with black bases, whereas in the paralectotype the tergites are black with pale apical triangular spots in the middle. Most likely Konow’s “segmentorum abdominalium fasciis magis minusve latis flavidis” refers to this variability. Furthermore, the black color of the tips



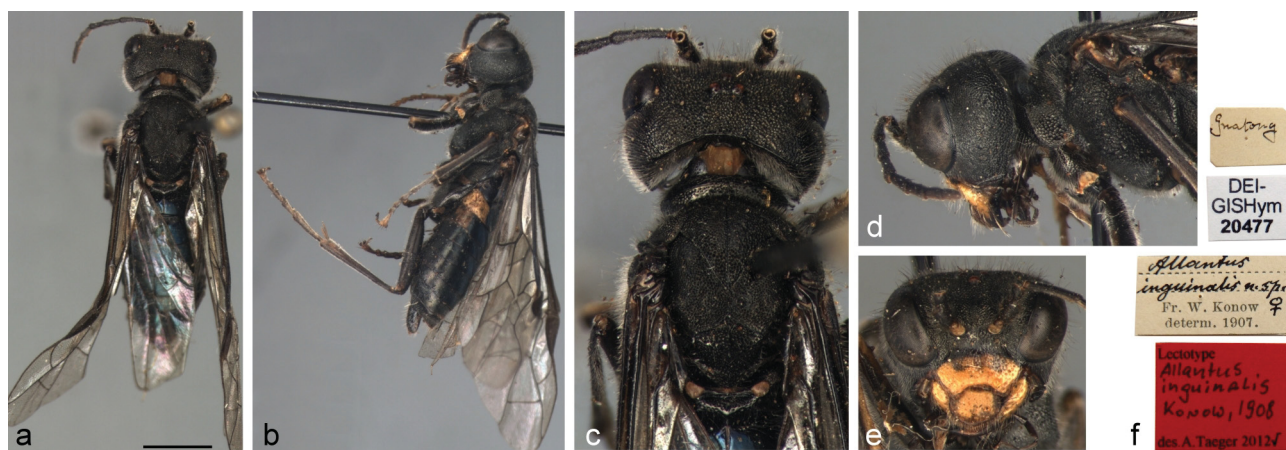
of femora and tibiae and the black mark on the mesopleura is only distinct in the paralectotype, whereas in the lectotype these dark parts are brown. It is not possible to exclude that the rather pale color of the lectotype is a result of a bad conservation of the specimen, but it seems to be more likely that these parts never were black as in the paralectotype. Currently, the species is not placed in a subgenus.

### *Allantus inguinalis* Konow, 1908

A valid species, *Tenthredo inguinalis* (Konow, 1908).

**Types.** *Allantus inguinalis* Konow, 1908: 20–21. Syntypes ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100194, MNCN Cat. Tipos N° 8134, Fig. 25, see also <http://dx.doi.org/10.6084/m9.figshare.759669>). Type locality: India, Sikkim. Paralectotype: ♀, “Sikkim” (SDEI, see <http://dx.doi.org/10.6084/m9.figshare.795276>).

**Discussion.** Saini (2007: 116) implied that the paralectotype specimen from the SDEI is the holotype. The species is very similar to *T. opposita* (F. Smith, 1878) (= *Fethalia nigra* Cameron, 1902), the type species of *Fethalia*. Malaise (1945) considered *Fethalia* to be a subgenus of *Tenthredo*, but the tridentate clypeus (the only reason for subgeneric separation) seems to be a very weak character. In *inguinalis*, the clypeus is usually not tridentate. Currently, the species is not placed in a subgenus.



**FIGURE 25.** *Allantus inguinalis*, lectotype ♀. a. dorsal, scale 2 mm; b. lateral; c. head and thorax dorsal; d. head and thorax lateral; e. face; f. labels.

### *Allantus luminosus* Konow, 1899

A subjective junior synonym of *Tenthredo (Zonuledo) flavipennis* Brullé, 1832. Synonymy by Benson (1968: 171).

**Types.** *Allantus luminosus* Konow, 1899: 204–205. Syntypes ♂♀, “As. Min. (Akbés)”. Lectotype ♂ designated by Taeger (1991a: 383) (SDEI, see <http://dx.doi.org/10.6084/m9.figshare.759772>). Type locality: Turkey: Hatay: Akbes (36.857°N, 36.518°E; “Akbés”). Paralectotypes: 3 ♀ (MNCN\_Ent 100198, 100199 and 100200), 2 ♂ (MNCN\_Ent 100196 and 100197), “Akbés”, MNCN Cat. Tipos N° 8135.

**Discussion.** The lectotype was selected by Taeger (1991a). Accordingly, the specimens of the MNCN are paralectotypes.

### *Tenthredo memoriaescalerae* Haris, 2004

A valid species, *Tenthredo (Tenthredella) memoriaescalerae* Haris 2004.

**Types.** *Tenthredo memoriaescalerae* Haris, 2004a: 156–158. Holotype ♀, “Sikkim”, (MNCN\_Ent 100201; figures see <http://dx.doi.org/10.6084/m9.figshare.759871>). Type locality: India, Sikkim. Paratypes: 2 ♀ (MNCN\_Ent 100202 and 100203), “Sikkim”, MNCN Cat. Tipos N° 9889.

**Discussion.** The species shows affinities with *T. variicolor* Malaise, 1945 and *T. ferruginea* Schrank, 1776. It is to be placed in the subgenus *Tenthredella* Rohwer, 1910.

### *Allantus merceti* Konow, 1905

A valid species, *Tenthredo* (*Paratenthredo*) *merceti* (Konow, 1905).

**Types.** *Allantus merceti* Konow, 1905b: 156–157. Syntypes ♀, “Hispania (Escorial)”. Lectotype ♀ designated by Taeger (1991b: 89–90) (SDEI, see <http://dx.doi.org/10.6084/m9.figshare.795279>). Type locality: Spain: Madrid: El Escorial (“Escorial”).

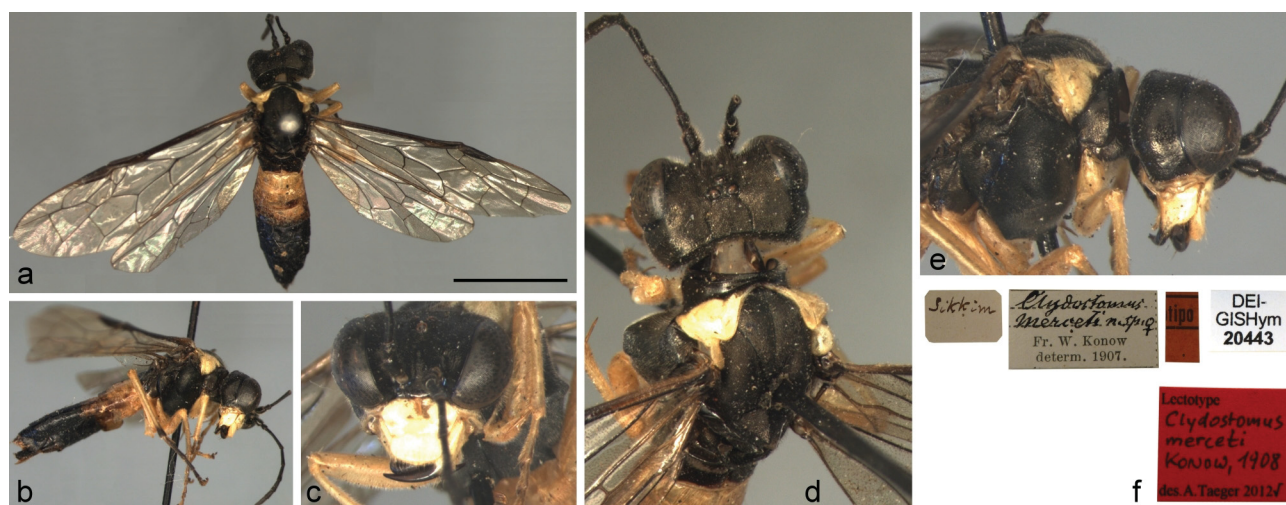
**Discussion.** There seem to be no further type specimens of this taxon in the MNCN collection.

### *Clydostomus merceti* Konow, 1908

A junior subjective synonym of *Tenthredo cestata* (Konow, 1908), synonymy by Saini *et al.* (2006: 592).

**Types.** *Clydostomus merceti* Konow, 1908: 19–20. Syntype(s) ♀, “Sikkim”. Lectotype ♀, hereby designated, (MNCN\_Ent 82479, MNCN Cat. Tipos N° 8137; Fig. 26, see also <http://dx.doi.org/10.6084/m9.figshare.757681>). Type locality: India, Sikkim.

**Discussion.** The taxon is very likely only a pale form of *T. cestata* as discussed by Saini *et al.* (2006). See also under *Clydostomus cestatus*.



**FIGURE 26.** *Clydostomus merceti*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. face; d. head and thorax dorsal; e. head and thorax lateral; f. labels.

### *Megalodontes merceti* Konow, 1904

A valid species, *Megalodontes merceti* Konow, 1904.

**Types.** *Megalodontes merceti* Konow, 1904: 226–227. Syntypes ♂ ♀ “Hispania (Escorial, Vaciamadrid)”. Lectotype ♀ hereby designated (SDEI, Fig. 27, see also <http://dx.doi.org/10.6084/m9.figshare.918597>). Type locality: Spain: Madrid: El Escorial. (“Escorial”). Paralectotypes: 1 ♂ “Escorial” (<http://dx.doi.org/10.6084/m9.figshare.760595>, SDEI); 1 ♀ “Vaciamadrid” (SDEI); 1 ♂, 1 ♀ “Escorial” (HNHM, <http://dx.doi.org/10.6084/m9.figshare.761192>), 1



♂ 1 ♀ “Escorial” (NHMW), 2 ♂ “Escorial” (MNCN\_Ent 81523 and 81524, MNCN Cat. Tipos 9981), 1 ♀ “Escorial” (<http://dx.doi.org/10.6084/m9.figshare.760466>, MNCN\_Ent 81525, MNCN Cat. Tipos 9981).

**Discussion.** A female was selected as lectotype, which was labeled as lectotype (but designation not published) by previous workers. Most likely, further potential paralectotype specimens may be found in other museums. Obviously Dusmet sent many specimens in exchange to other museums. It is not clear, if all these specimens really were examined by Konow, but there is no evidence to exclude specimens collected before 1904 (or without collecting date), if they were collected by Mercet in Escorial or Vaciamadrid. The species seems to be restricted to the area around Madrid, none of the examined 160 specimens was found more distant than 100 km from Madrid. All examined material was collected between 1900 and 1946 (but nearly 100 specimens without date), later (22.06.2008) only one ♀ has been photographed in Rivas-Vaciamadrid on flowers of *Thapsia* (?), see <http://dx.doi.org/10.6084/m9.figshare.761200>.



**FIGURE 27.** *Megalodontes merceti*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. head and thorax lateral; d. head and thorax dorsal; e. antenna; f. face; g. claw; h. labels.

### *Tenthredo minutosimplicis* Haris, 2004

A valid species, *Tenthredo minutosimplicis* Haris, 2004.

**Types.** *Tenthredo minutosimplicis* Haris, 2004a: 158–160. Holotype ♀, “Sikkim” (MNCN\_Ent 100204, MNCN Cat. Tipos N° 9888, see <http://dx.doi.org/10.6084/m9.figshare.762416>). Type locality: India, Sikkim.

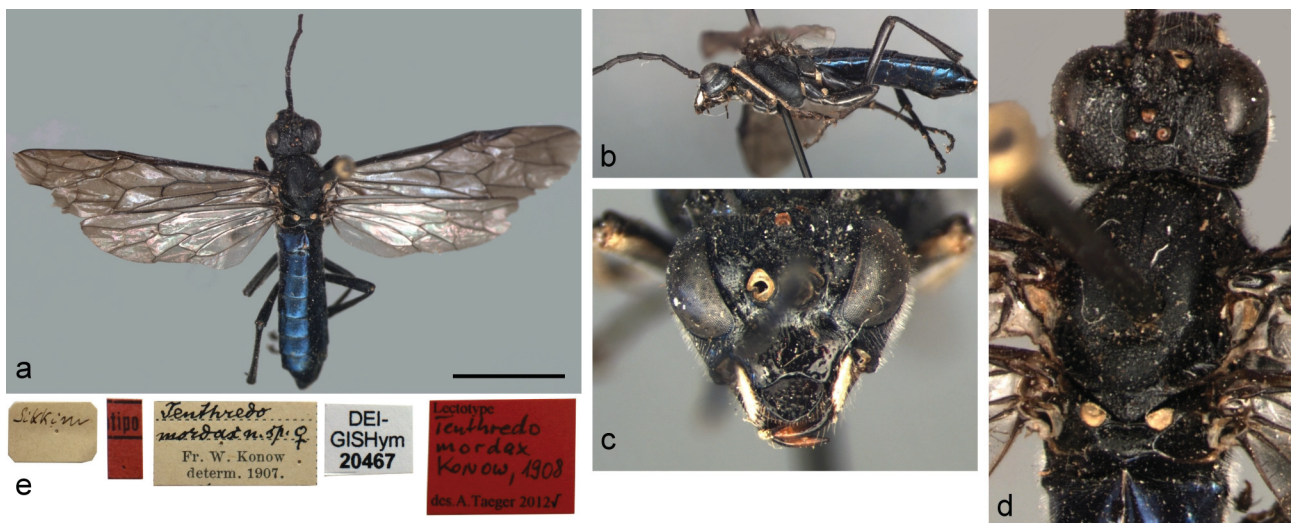
### *Tenthredo mordax* Konow, 1908

A valid species, *Tenthredo* (*Tenthredella*) *mordax* Konow, 1908.

**Types.** *Tenthredo mordax* Konow, 1908: 25–26. Syntype(s) ♀, “Sikkim”. Lectotype ♀, hereby designated, (MNCN\_Ent 100205, MNCN Cat. Tipos N° 8138, Fig. 28, see also <http://dx.doi.org/10.6084/m9.figshare.762439>). Type locality: India, Sikkim.

**Discussion.** There is no indication in the original description, how many specimens Konow had to hand. Very likely it was a single female, which is selected here as lectotype. Apparently, after Konow (1908) nobody examined the type. Malaise (1945) followed only the original description, and Saini (207: 132) claimed that the type should be in the SDEI and is lost. The description given by Saini does not completely agree with the type specimen (e.g.,

several white marks on head and thorax). Possibly he treated a different species under the name *T. mordax*. *Tenthredo mordax* may be placed in the subgenus *Tenthredella* Rohwer, 1910.



**FIGURE 28.** *Tenthredo mordax*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. face; d. head and thorax dorsal; e. labels.

### *Megalodontes mundus* Konow, 1904

A valid species, *Megalodontes mundus* Konow, 1904.



**FIGURE 29.** *Megalodontes mundus*, lectotype ♀. a. dorsal, scale 2 mm; b. lateral; c. face; d. head lateral; e. head and thorax dorsal; f. labels.

**Types.** *Megalodontes mundus* Konow, 1904: 228–229. Syntypes ♀, “Hispania (Los Moulinos)”. Lectotype ♀, hereby designated (MNCN\_Ent 100206, MNCN Cat. Tipos N° 9979, Fig. 29, see also <http://dx.doi.org/10.6084/m9.figshare.763230>). Type locality: Spain: Madrid: Los Molinos. Paralectotypes: 2 ♀ (MNCN\_Ent 81526 and 81527, MNCN Cat. Tipos N° 9979), 1 ♀ SDEI (<http://dx.doi.org/10.6084/m9.figshare.821284>), all data same as for lectotype.

**Discussion.** The taxon belongs to the *Megalodontes cephalotes* complex, and might be only a very pale form of *cephalotes*. Hitherto only known from the types, all collected on 7.7.1902 in Los Molinos near Madrid. This



would be the westernmost locality known for *cephalotes* (except for a specimen from Beges, Cantabria). Very similar pale forms of *cephalotes* (forma f according to Taeger 2002) are known from the Spanish Pyrenees, but these are less sculptured than *mundus*. *Megalodontes* species usually show clear differences in their COI barcodes. Perhaps fresh specimens might help to clarify the status of the taxon.

### ***Pristiphora nievesi* Haris, 2004**

A valid species, *Pristiphora* (*Pristiphora*) *nievesi* Haris, 2004.

**Type.** *Pristiphora nievesi* Haris, 2004b: 164–165. Holotype “El Ventorrillo, 1480 m, Madrid” (MNCN\_Ent 100207, see <http://dx.doi.org/10.6084/m9.figshare.763315>). Type locality: Spain: Madrid: El Ventorrillo, 1480 m. Paratypes: 3 ♀ same data (MNCN\_Ent 100208, 100209 and 100210). All specimens MNCN Cat. Tipos N° 9876.

### ***Tenthredo nigroypsilon* Haris, 2004**

A valid species, *Tenthredo nigroypsilon* Haris, 2004.

**Type.** *Tenthredo nigroypsilon* Haris, 2004a: 156–157. Holotype ♀, “Sikkim” (MNCN\_Ent 100211, see <http://dx.doi.org/10.6084/m9.figshare.763321>). Paratypes: 3 ♀ same data (MNCN\_Ent 100212 see <http://dx.doi.org/10.6084/m9.figshare.850210>, 100213 and 100214). Type locality: India, Sikkim. All specimens MNCN Cat. Tipos N° 9877.

**Discussion.** The apex of the abdomen of the holotype is missing.

### ***Labidarge nimbata* Konow, 1907**

A junior subjective synonym of *Scobina semifusca* (Norton, 1867), synonymy by Smith (1992: 25).

**Type.** *Labidarge nimbata* Konow, 1907d: 220. Holotype ♂ “Mexico” (MNCN\_Ent 81544, MNCN Cat. Tipos N° 2262, see <http://dx.doi.org/10.6084/m9.figshare.765337>). Type locality: Mexico.

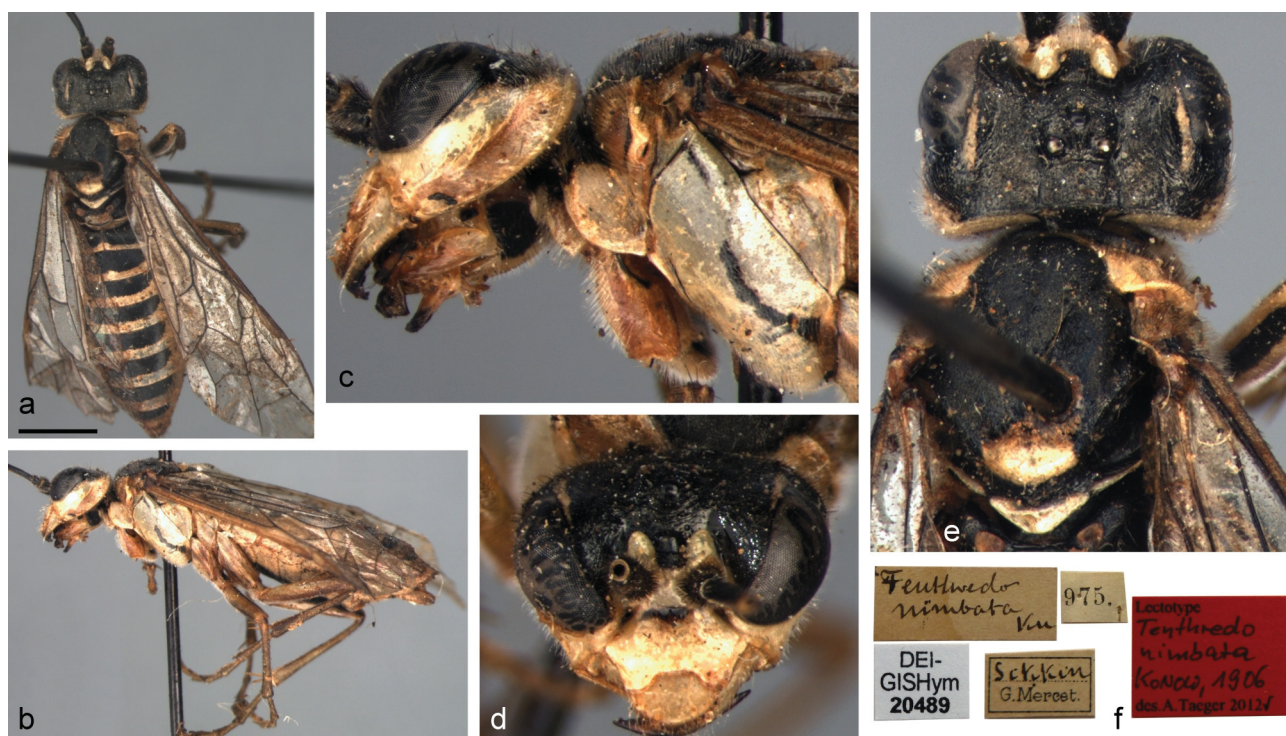
**Discussion.** Smith (1992: 25) designated the specimen as lectotype. In his work Konow (1907d) described three species. For *L. nimbata* he noted “Die Type befindet sich im Naturhist. National-Museum in Madrid” [translated: ‘The type is housed in the Natural History National Museum in Madrid’], similar for *L. pullipennis*, whereas he noted for *L. tegularis* “Die Typen gleichfalls im Madrider Museum” [‘The types are also in the Museum in Madrid’]. From this content is clear, that the first two species are based on holotypes, and *tegularis* on syntypes.

### ***Tenthredo nimbata* Konow, 1906**

A valid species, *Tenthredo* (*Eurogaster*) *nimbata* Konow, 1906.

**Types.** *Tenthredo nimbata* Konow, 1906: 126–127. Syntypes ♂ ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100222, MNCN Cat. Tipos N° 8118, Fig. 30, see also <http://dx.doi.org/10.6084/m9.figshare.765439>). Type locality: India, Sikkim. Paralectotypes: 1 ♂ 1 ♀ (SDEI), “Sikkim” (<http://dx.doi.org/10.6084/m9.figshare.765444>).

**Discussion.** Malaise (1945: 227) considered the SDEI ♀ to be a paratype, Saini (2007: 134) claimed erroneously that the holotype ♀ and two paratypes should be in the SDEI.

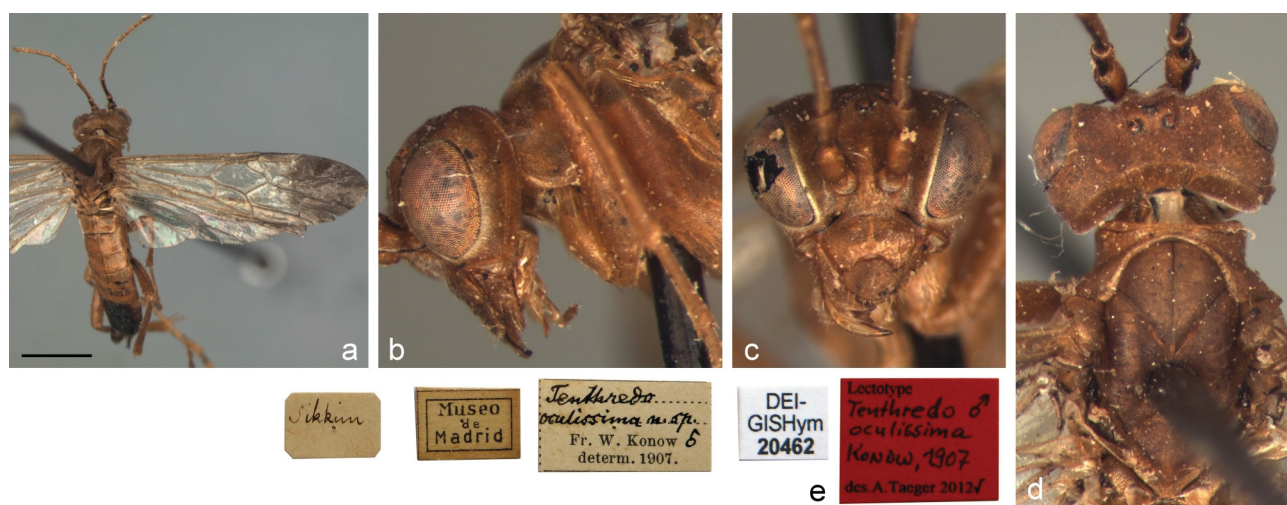


**FIGURE 30.** *Tenthredo nimbata*, lectotype ♀. a. dorsal, scale 2 mm; b. lateral; c. head and thorax lateral; d. face; e. head and thorax dorsal; f. labels.

### *Tenthredo oculissima* Konow, 1907

A valid species, *Tenthredo oculissima* Konow, 1907.

**Types.** *Tenthredo oculissima* Konow, 1907b: 173. Syntypes ♂ ♀, “Sikkim”. Lectotype ♂, hereby designated (MNCN\_Ent 100215, MNCN Cat. Tipos N° 8139, Fig. 31, see also <http://dx.doi.org/10.6084/m9.figshare.765451>). Type locality: India, Sikkim. Paralectotypes: 1 ♀ (MNCN\_Ent 100216, MNCN Cat. Tipos N° 8139, <http://dx.doi.org/10.6084/m9.figshare.765453>), 1 ♂ 1 ♀ (SDEI, <http://dx.doi.org/10.6084/m9.figshare.766197>), all labeled “Sikkim”.



**FIGURE 31.** *Tenthredo oculissima*, lectotype ♂. a. dorsal, scale 2 mm; b. head and thorax lateral; c. face; d. head and thorax dorsal; e. labels.



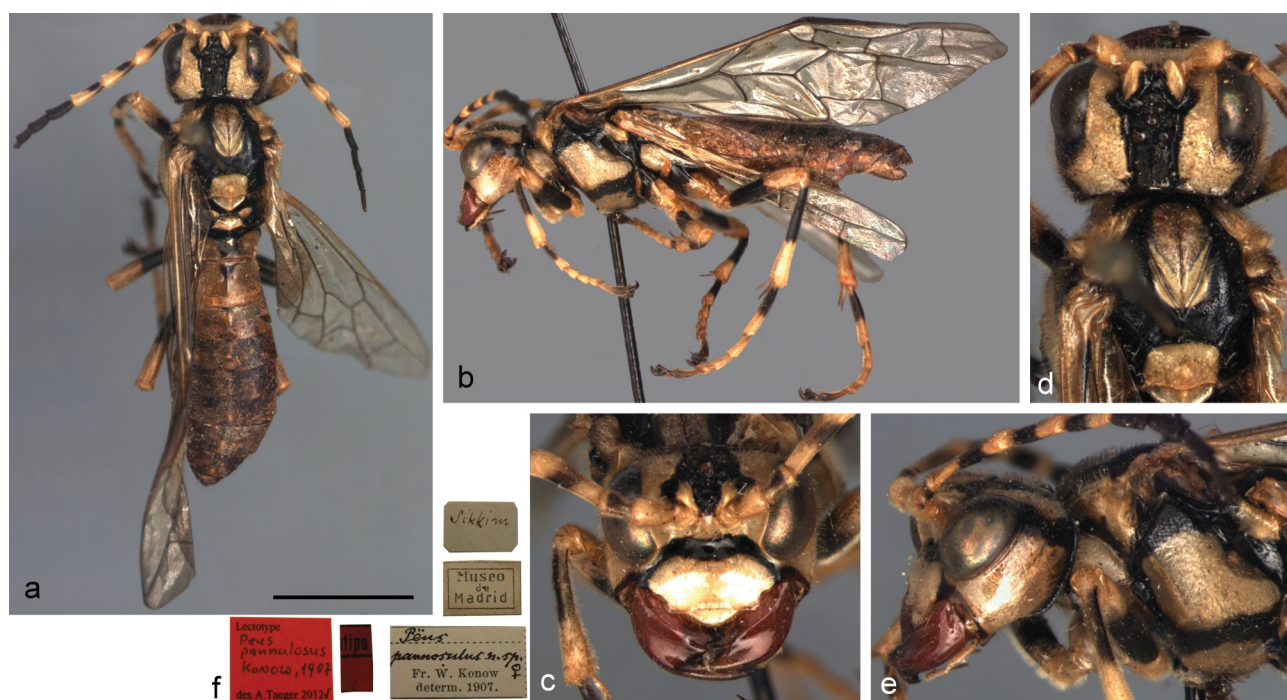
**Discussion.** Malaise (1945: 211) considered a female (perhaps the specimen from MNCN) as “the type”, whereas Saini (2007: 134) erroneously noted that the holotype ♀ and a couple of paratypes should be in the SDEI. The species shows a very distinct sexual dimorphism.

### *Peus pannulosus* Konow, 1907

A valid species, *Tenthredo* (*Peus*) *pannulosa* (Konow, 1907).

**Types.** *Peus pannulosus* Konow, 1907b: 168. Syntypes ♂ ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100223, MNCN Cat. Tipos N° 8140, Fig. 32, see also <http://dx.doi.org/10.6084/m9.figshare.766199>). Type locality: India, Sikkim. Paralectotype: 1♂, “Sikkim” (SDEI, <http://dx.doi.org/10.6084/m9.figshare.766237>).

**Discussion.** Saini (2007: 134) erroneously noted that the holotype ♀ and a ♀ paratype should be in the SDEI.



**FIGURE 32.** *Peus pannulosus*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. face; d. head and thorax dorsal; e. head and thorax lateral; f. labels.

### *Pontania phylcifoliae* Forsius, 1919

A junior subjective synonym of *Pontania arcticornis* Konow, 1904, synonymy by Lindqvist (1955).

**Types.** *Pontania phylcifoliae* Forsius, 1919: 165–168. Syntypes ♂, ♀ “Typen ... aus Helsingfors (durch Zucht erhalten; Cotypen aus Lojo und Karislojo).” Lectotype ♀ (Helsingfors, RFT, not examined), designated by Vikberg & Zinovjev (2006), a former designation by Kopelke (1991) is invalid. Paralectotypes not mentioned in Vikberg & Zinovjev (2006). In MNCN 1♂ paralectotype “Lojo” (MNCN\_Ent 82343, MNCN Cat. Tipos N° 10220).

### *Tenthredo podagrica* Konow, 1907

A valid species, *Tenthredo podagrica* Konow, 1907.

**Types.** *Tenthredo podagrica* Konow, 1907b: 171. Syntype(s) ♀, “Sikkim”. Lectotype ♀, hereby designated

(MNCN\_Ent 82504, MNCN Cat. Tipos N° 8141, Fig. 33, see also <http://dx.doi.org/10.6084/m9.figshare.766315>). Type locality: India, Sikkim.

**Discussion.** Saini (2007: 138) erroneously assumed that the holotype ♀ is in the SDEI.



**FIGURE 33.** *Tenthredo podagrica*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. head and thorax lateral; d. face; e. head and thorax dorsal; f. labels.

### *Tenthredo pseudomelaena* Malaise, 1945

A valid species, *Tenthredo* (*Eurogaster*) *pseudomelaena* Malaise, 1945.

**Types.** *Tenthredo pseudomelaena* Malaise, 1945: 232. Syntypes, 9 ♂, 10 ♀, “Burma-Yunnan frontier”. Type locality: Myanmar: Kachin State: Kambaiti (ca. 25.399°N, 98.118°E). Syntypes 1 ♀, 1 ♂, Kambaiti (♀ MNCN\_Ent 100263, <http://dx.doi.org/10.6084/m9.figshare.850208>, ♂ MNCN\_Ent 100264, MNCN Cat. Tipos N° 9187).

**Discussion.** The MNCN specimens will be selected as paralectotypes in the course of a study of Malaise’s types (Taeger & Vårdal, in prep.). Other syntypes are known from the NHRS, HNHM, and the Naturkundemuseum Berlin.

### *Pteronidea pseudonotabilis* Enslin, 1916

A junior subjective synonym of *Nematus* (*Pteronidea*) *bohemani* Thomson, 1871, synonymy by Lindqvist (1954: 159).

**Types.** *Pteronidea pseudonotabilis* Enslin, 1916: 417–418. Syntypes ♀, “Finnland”. Syntype (?) ♀ “Karislojo” (MNCN\_Ent 82352, <http://dx.doi.org/10.6084/m9.figshare.853779>), 1 ♀ syntype, ZSM, “Karislojo”.

**Discussion.** Both, in MNCN and ZSM, specimens are to be found, which were apparently subsequently labeled as “Type” or “Paratype”. The MNCN specimen was labeled by Dusmet. Enslin (1916: 417–418) described only females, and claimed that the larva and the males are unknown. Forsius (1921) noted that the type material was reared in 1909 and 1910, and that he also got males. But obviously, this was unknown to Enslin. Forsius (1921)



also noted that he reared the species again in 1919, and described the larva and the male. Therefore, all males, and all specimens labeled “ex larva” in addition to the type label, are very likely not part of the type series. The ♀ specimen from ZSM is currently the only known type specimen with Enslin’s identification label. Perhaps more female syntypes may be found in RFT. A lectotype designation should be made in the course of the revision of this difficult group.

### ***Labidarge pullipennis* Konow, 1907**

A junior subjective synonym of *Scobina poecila* (Klug, 1834), synonymy by Smith (1992: 30).

**Types.** *Labidarge pullipennis* Konow, 1907d: 221. Holotype ♂ “Mexico” (MNCN\_Ent 81543, MNCN Cat. Tipos N° 2261, see <http://dx.doi.org/10.6084/m9.figshare.767315>). Type locality: Mexico.

**Discussion.** Smith (1992: 25) designated the specimen as lectotype, see discussion under *L. nimbata*.

### ***Laurentia (Laurentina) ruficornis* Malaise, 1937**

A valid species, *Aglaostigma (Neurosiobla) ruficorne* (Malaise, 1937).

**Types.** *Laurentia (Laurentina) ruficornis* Malaise, 1937b: 46. Syntypes: 14 ♂, 8 ♀ “Burma: Yunnan frontier, alt. 2.000 m.; China, prov. Szechuan Tatsienlu and Koutchéou” Type locality: Myanmar: Kachin State: Kambaiti (ca. 25.399°N, 98.118°E). Syntype ♂ “N.E. Burma, Kambaiti, 26/4. R. Malaise”. MNCN\_Ent 100265, MNCN Cat. Tipos N° 8142, <http://dx.doi.org/10.6084/m9.figshare.850204>.

**Discussion.** This specimen will be selected as paralectotype in the course of a study of Malaise’s types (Taeger & Vårdal, in prep.).

### ***Siobla rufipes* Malaise, 1945**

A junior subjective synonym of *Siobla atra* Malaise, 1945, synonymy by Niu & Wei (2013).

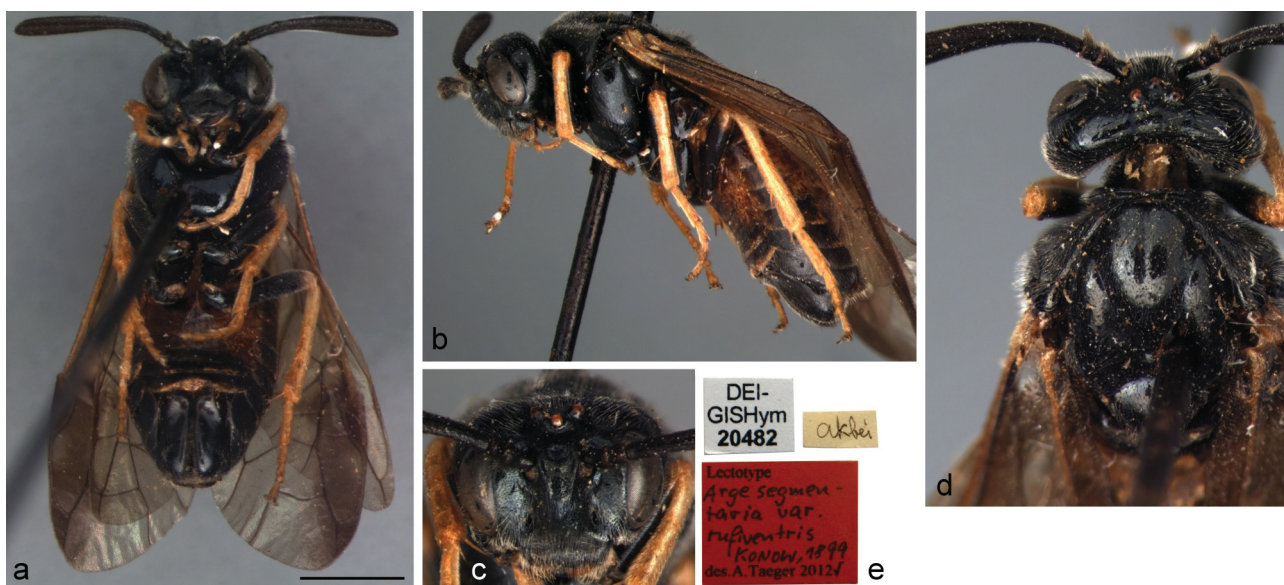
**Types.** *Siobla rufipes* Malaise, 1945: 124. Syntypes 30 ♂, “Burma-Yunnan frontier. Type locality: Kambaiti at 2000 m.” Lectotype ♂ (“N. E. BURMA, Kambaiti, 7000ft”, NHRS), designated by Niu & Wei (2013). Paralectotypes from the same locality in various collections. 1 ♂ in MNCN (MNCN\_Ent 100258, MNCN Cat. Tipos N° 8143).

### ***Arge segmentaria* var. *rufiventris* Konow, 1899**

A junior subjective synonym of *Arge rustica* (Linnaeus, 1758). Hitherto always treated as a synonym of the same species: *Arge segmentaria* (Panzer, 1803) = *Arge atrata* (Forster, 1771) = *Arge rustica* (Linnaeus, 1758) (Malaise & Benson 1934).

**Types.** *Arge segmentaria* var. *rufiventris* Konow, 1899: 204. Syntypes ♂ ♀, “ad Asiae minoris oppidum Akbes”. Lectotype ♀, hereby designated (MNCN\_Ent 82313, MNCN Cat. Tipos N° 2265, Fig.34, see also <http://dx.doi.org/10.6084/m9.figshare.767323>). Type locality: Turkey: Hatay: Akbes (36.857°N, 36.518°E; “Akbés”). Paralectotypes: 6 ♀ (MNCN\_Ent 82315–82320), 4 ♂ (MNCN\_Ent 82314, see <http://dx.doi.org/10.6084/m9.figshare.769203>, MNCN\_Ent 82321–82323, all MNCN Cat. Tipos N° 2265).

**Discussion.** The taxon requires further scrutiny. It seems quite possible, that several species are mixed up under the name *Arge rustica*. Currently about 10 nominal taxa are treated as synonyms of *A. rustica*. Recent results of COI barcoding show four different clusters for specimens identified as *A. rustica*. Referring to Konow (1899), the taxon was after its description only mentioned by Schedl (2009, for Syria) and in synonymy lists of catalogs. However, even if the locality Akbés in the late 19<sup>th</sup> and early 20<sup>th</sup> century has been associated with “Syria” in the historical sense, it belongs today to Turkey.



**FIGURE 34.** *Arge segmentaria* var. *rufiventris*, lectotype ♀. a. ventral, scale 2 mm; b. lateral; c. face; d. head and thorax dorsal; e. labels.

### *Tenthredo rugiceps* Konow, 1908

A valid species, *Tenthredo* (*Eurogaster*) *rugiceps* Konow, 1908.

**Types.** *Tenthredo rugiceps* Konow, 1908: 24. Syntypes ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100237, MNCN Cat. Tipos N° 8144, Fig. 35, see also <http://dx.doi.org/10.6084/m9.figshare.769215>). Type locality: India, Sikkim. Paralectotypes: 1 ♀ MNCN\_Ent 100238, MNCN Cat. Tipos N° 8144 (<http://dx.doi.org/10.6084/m9.figshare.769218>), 1 ♀ SDEI (<http://dx.doi.org/10.6084/m9.figshare.769219>), both “Sikkim”.

**Discussion.** Saini (2007: 141) erroneously claimed that the holotype ♀ and a ♀ paratype is in the SDEI. The species belong to the subgenus *Eurogaster* Zirngiebl, 1953.



**FIGURE 35.** *Tenthredo rugiceps*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. face; d. head and thorax lateral; e. head and thorax dorsal; f. labels.



### *Allantus rupico* Konow, 1908

A junior subjective synonym of *Tenthredo* (*Eurogaster*) *maculiger dioctrioides* (Jakowlew, 1891), synonymy by Taeger (1988: 344).

**Types.** *Allantus rupico* Konow, 1908: 21–22. Syntypes ♂ ♀, “Sikkim”. Lectotype ♀ (SDEI, <http://dx.doi.org/10.6084/m9.figshare.903666>) designated by Taeger (1985: 137). Type locality: India, Sikkim. Paralectotypes: 1 ♀ “Gnatong” (MNCN\_Ent 101344; <http://dx.doi.org/10.6084/m9.figshare.903668>), 1 ♂ “Sikkim” MNCN\_Ent 101345 <http://dx.doi.org/10.6084/m9.figshare.903669>), 1 ♀ “Sikkim” (MNCN\_Ent 101346) all MNCN Cat. Tipos N° 8145.

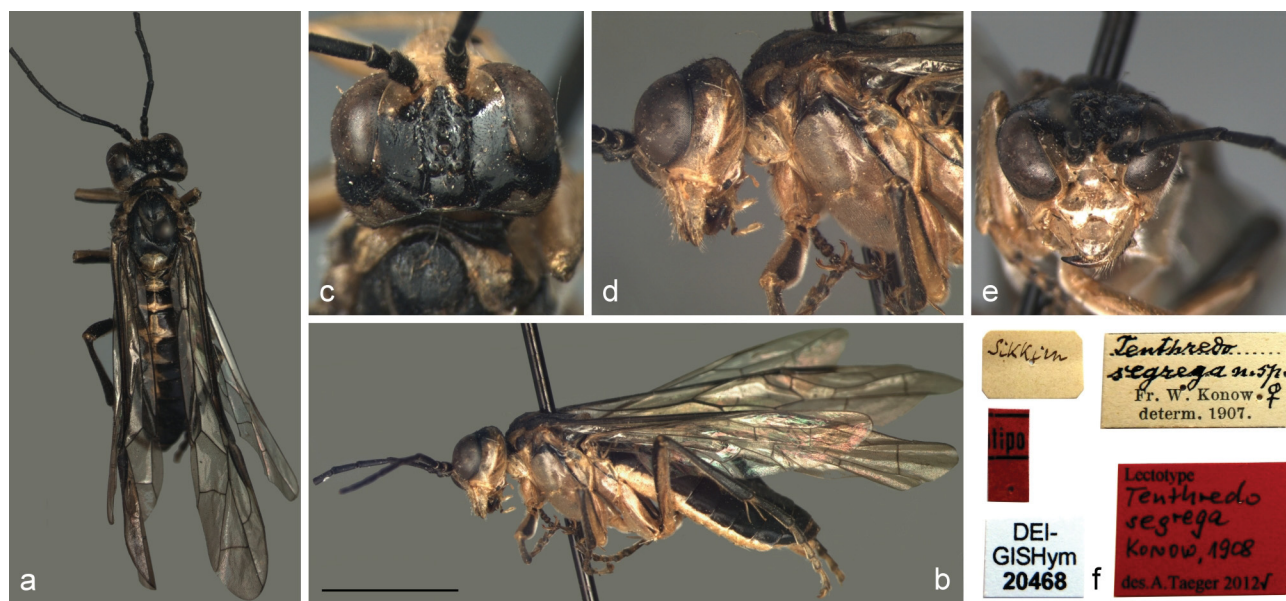
**Discussion.** The status of *dioctrioides* as subspecies of *Tenthredo maculiger* (Jakowlew, 1891) is uncertain.

### *Tenthredo segregata* Konow, 1908

A valid species, *Tenthredo* (*Eurogaster*) *segregata* Konow, 1908.

**Types.** *Tenthredo segregata* Konow, 1908: 23–24. Syntype(s) ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100246, MNCN Cat. Tipos N° 8146, Fig. 36, see also <http://dx.doi.org/10.6084/m9.figshare.769237>). Type locality: India, Sikkim.

**Discussion.** Apparently, after Konow (1908) nobody examined the type(s) of *segregata*. Most likely it was a single female, which is selected here as lectotype. Malaise (1945) used only the original description, and Saini (2007: 56) followed Malaise. Their descriptions are somewhat misleading, as the species is characterized by them among other things by its completely black mesopleura. In reality, the mesopleura are mainly pale (green in life), only black in the upper corner (given as “*pleurorum suturis et mesopleurorum summo apice subalari nigris*” in Konow, 1908). The species belongs to the subgenus *Eurogaster* Zirngiebl, 1953.



**FIGURE 36.** *Tenthredo segregata*, lectotype ♀. a. dorsal; b. lateral, scale 5 mm; c. head dorsal; d. head and thorax lateral; e. face; f. labels.

### *Allantus serenus* Konow, 1899

A junior subjective synonym of *Tenthredo* (*Zonuledo*) *nazarensis* (André, 1881), synonymy by Taeger (1991a: 390).

**Types.** *Allantus serenus* Konow, 1899: 205. Syntypes ♂ ♀, “Asia min. (Alexandrette)”. Lectotype ♀, designated

by Taeger (1991a: 391), “Alexandrette” (SDEI, see <http://dx.doi.org/10.6084/m9.figshare.769243>). Type locality: Turkey: Iskenderun (“Alexandrette”). Paralectotypes: 1 ♂ (SDEI), 3 ♀ (MNCN\_Ent 100248, 100249 and 100250), 1 ♂ (MNCN\_Ent 100247) (MNCN\_Ent 100247 and 100248, <http://dx.doi.org/10.6084/m9.figshare.769242>), all from “Alexandrette”, MNCN Cat. Tipos N° 8147.

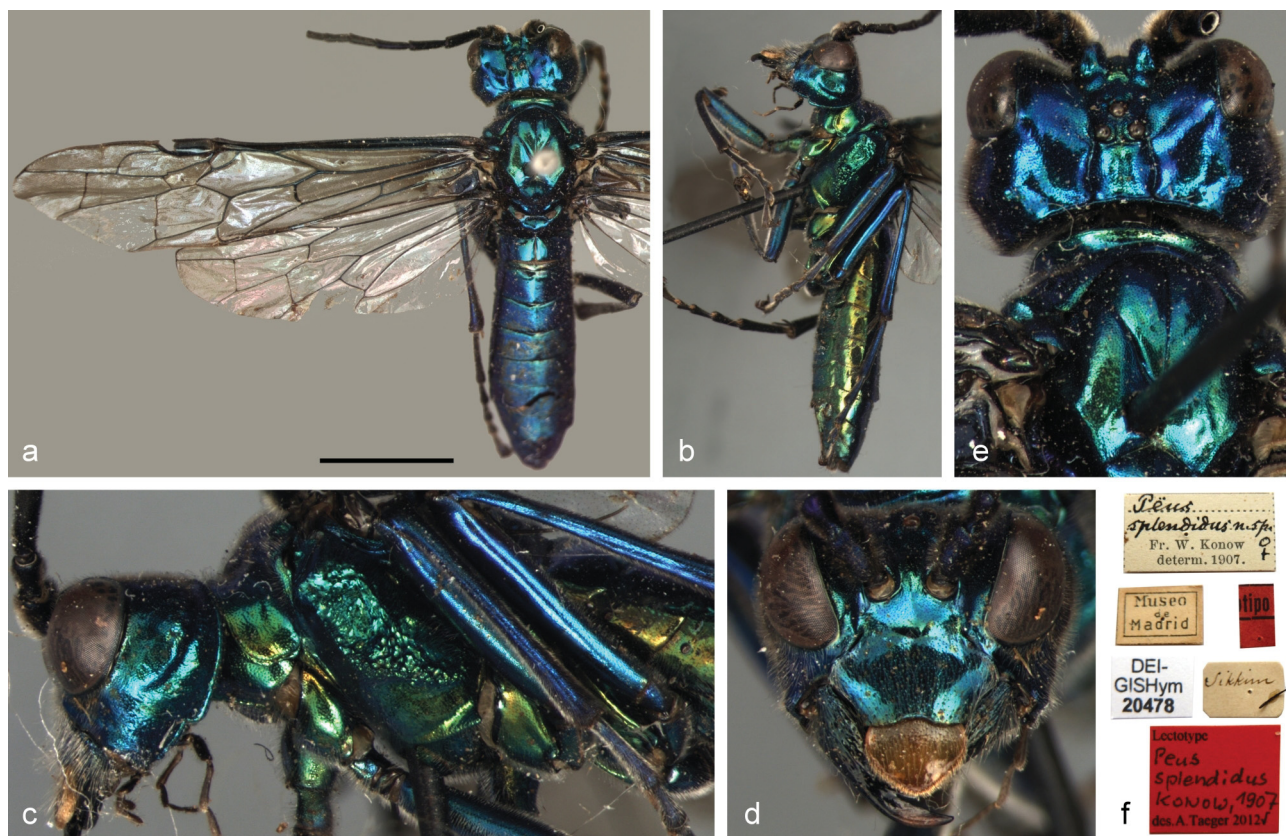
**Discussion.** So far, the four specimens from MNCN have not been examined. These are also to be considered as paralectotypes.

### *Peus splendidus* Konow, 1907

A valid species, *Tenthredo* (*Metallopeus*) *splendida* (Konow, 1907).

**Types.** *Peus splendidus* Konow, 1907b: 168–169. Syntypes ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100254, MNCN Cat. Tipos N° 8148, Fig. 37, see also <http://dx.doi.org/10.6084/m9.figshare.769250>). Type locality: India, Sikkim. Paralectotypes: 2 ♀, NHRS (<http://dx.doi.org/10.6084/m9.figshare.773063>, <http://dx.doi.org/10.6084/m9.figshare.773064>), 1 ♀ SDEI (<http://dx.doi.org/10.6084/m9.figshare.773058>), all “Sikkim”.

**Discussion.** See discussion under *Peus cupreiceps*.



**FIGURE 37.** *Peus splendidus*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. head and thorax lateral; d. face; e. head and thorax dorsal; f. labels.

### *Sahlbergia struthiopteridis* Forsius, 1910

A junior subjective synonym of *Thrinax contigua* Konow, 1885, synonymy with *Hemitaxonus contiguus* by Blank (1998: 218).

**Types.** *Sahlbergia struthiopteridis* Forsius, 1910: 50–51. Syntypes ♂, ♀, “Lojo”. Type locality: Finland: Uusimaa: Lojo (60.250°N 24.083°E). Syntypes: 1 ♂ “Lojo”, MNCN\_Ent 82360, MNCN Cat. Tipos N° 2508; 1 ♀ “Lojo”, ZSM (<http://dx.doi.org/10.6084/m9.figshare.903671>).



**Discussion.** Further syntypes are to be expected in RFT. The lectotype should be selected from this collection, if necessary.

### *Pachyprotasis subtilis* Malaise, 1945

A valid species, *Pachyprotasis subtilis* Malaise, 1945.

**Types.** *Pachyprotasis subtilis* Malaise, 1945: 150. Syntypes, 25 ♂, 15 ♀, “Burma-Yunnan frontier, 1800–2000 m”. Type locality: Myanmar: Kachin State: Kambaiti (ca. 25.399°N, 98.118°E). Syntypes: 1 ♂ “N.E. Burma, Kambaiti, 30/4. R. Malaise”, MNCN\_Ent 100267; 1 ♀, same data but 23/6, MNCN\_Ent 100266 (<http://dx.doi.org/10.6084/m9.figshare.850190>), both MNCN Cat. Tipos N° 8149. Several syntypes in NHRS collection.

**Discussion.** The MNCN specimens will be selected as paralectotypes in the course of a study of Malaise’s types (Taeger & Vårdal, in prep.).

### *Tenthredo suta* Konow, 1906

A valid species, *Tenthredo (Olivacedo) suta* Konow, 1906.

**Types.** *Tenthredo suta* Konow, 1906: 127. Syntypes ♀, “Sikkim”. Lectotype ♀, hereby designated (MNCN\_Ent 100255, MNCN Cat. Tipos N° 2487, Fig. 38, see also <http://dx.doi.org/10.6084/m9.figshare.775302>). Type locality: India, Sikkim. Paralectotype: 1 ♀ SDEI (<http://dx.doi.org/10.6084/m9.figshare.775300>), “Sikkim”.

**Discussion.** Malaise (1945: 230) and Saini (2007: 148) both mentioned female and male types, but this is incorrect. Konow described only the female. The hitherto unplaced species belongs in the subgenus *Olivacedo* Zhelochovtsev, 1988.



**FIGURE 38.** *Tenthredo suta*, lectotype ♀. a. dorsal, scale 5 mm; b. lateral; c. face; d. head and thorax lateral; e. head and thorax dorsal; f. labels.

### *Labidarge tegularis* Konow, 1907

A junior subjective synonym of *Scobina terminalis* (Klug, 1814), synonymy by Smith (1992: 28).

**Types.** *Labidarge tegularis* Konow 1907d: 220–221. Syntypes ♂, “Brasilía, Coca.” Lectotype ♂, designated by

Smith (1992: 28, MNCN\_Ent 81545, MNCN Cat. Tipos N° 11741, <http://dx.doi.org/10.6084/m9.figshare.775318>). Type locality: Ecuador: Puerto Francisco de Orellana (“Coca”). Paralectotype: 1 ♂ same data as the lectotype (MNCN\_Ent 81546, MNCN Cat. Tipos N° 11741).

**Discussion.** Konow (1907d) assumed “Coca” to be a locality in Brazil, but it is a place in Ecuador. The green labels with the data of Pacific’s expedition were added as a result of a project cataloguing the insects collected in that Expedition (Santos Mazorra, 1994).

### ***Clyparge terminalis* Pasteels, 1963**

A valid species, *Clyparge terminalis* Pasteels, 1963.

**Types.** *Clyparge terminalis* Pasteels, 1963: 543–544. Holotype ♀, “Cameroun 1898–1899” (MNCN\_Ent 82311, MNCN Cat. Tipos N° 10274 see <http://dx.doi.org/10.6084/m9.figshare.775321>). Type locality: Cameroon “Kamerun”. Paratype: 1 ♂ [?] same data (MNCN\_Ent 82312, MNCN Cat. Tipos N° 10274).

### ***Megalodontes thor* Taeger, 2002**

A valid species, *Megalodontes thor* Taeger, 2002.

**Types.** *Megalodontes thor* Taeger, 2002: 476–477. Holotype ♀ Germany, Bavaria, Dingolfing, NSG Rosenau (SDEI, <http://dx.doi.org/10.6084/m9.figshare.913568>). Paratypes from C, SE and E Europe. In MNCN 1♂, 3♀ from Romania, Comana Vlasca (MNCN\_Ent 81529–MNCN\_Ent 81532, MNCN Cat. Tipos N° 9980).

### **Acknowledgments**

The work of the first author at the Museo Nacional de Ciencias Naturales, Madrid was supported by the European Union-funded Integrated Activities grant SYNTHESYS (ES-TAF-1847), the examination of Malaise’s types in the Naturhistoriska riksmuseet, Stockholm became possible also through SYNTHESYS grants (SE-TAF 4856[2008], SE-TAF 1751[2012]). We wish to thank Dr H. Vårdal (Stockholm) for the loan of material.

Our thanks to Carolina Martín Albaladejo and Felicitas Ramírez Malo (Archive of the MNCN) for providing the images of Spanish entomologists included in this article, and Editha Schubert (Archive of the SDEI) for Konow’s portrait. Thanks for critical remarks and discussions to our colleagues at the SDEI, Dr S.M. Blank and A. Liston, who also corrected the English. We also wish to thank Dr F. Koch (Berlin) and an anonymous colleague for the review of the manuscript and Prof. A. Lelej (Vladivostok) for editing the paper.

### **References**

- Aksoy, A., Dixon, J.M. & Hale, W.H.G. (1998) *Capsella bursa-pastoris* (L.) Medikus (*Thlaspi bursapastoris* L., *Bursa bursa-pastoris* (L.) Shull, *Bursa pastoris* (L.) Weber). *Journal of Ecology*, 86 (1), 171–186.  
<http://dx.doi.org/10.1046/j.1365-2745.1998.00260.x>
- André, E. (1881) *Species des Hyménoptères d'Europe & d'Algérie*. Beaune (Côte-d'Or), 1 [1879–1882] (11), 565–596.
- Benson, R.B. (1931) Notes on the British sawflies of the genus *Athalia* (Hymenoptera, Tenthredinidae), with the description of a new species. *The Entomologist's Monthly Magazine, Third Series*, 67 (17), 109–114.
- Benson, R.B. (1953) The sawfly *Tenthredo temula* of British authors is an undescribed species (Hym., Tenthredinidae). *The Entomologist's Monthly Magazine, Fourth Series*, 89 (14), 275–277.
- Benson, R.B. (1962) A revision of the Athaliini (Hymenoptera: Symphyta). *Bulletin of the British Museum (Natural History). Entomology series*, 11, 333–382.
- Benson, R.B. (1968) Hymenoptera from Turkey, Symphyta. *Bulletin of the British Museum (Natural History). Entomology series*, 22 (4), 111–207.



- Blank, S.M. (1998) Die mittel- und nordeuropäischen Selandriinae (Hymenoptera: Tenthredinidae). In: Taeger, A. & Blank, S.M. (Eds.), *Pflanzenwespen Deutschlands (Hymenoptera, Symphyta). Kommentierte Bestandsaufnahme*. Goecke & Evers, Keltern, pp. 207–224.
- Brullé, A. (1832) Zoologie. Deuxième Section. Des animaux articles. *Expédition scientifique de Morée. Section des sciences physiques*, 3 (1), 64–395; Fol. 1–29.
- Cameron, P. (1902) Descriptions of new genera and species of Hymenoptera collected by Major C. G. Nurse at Deesa, Simla and Ferozepore. Part II. *Journal of the Bombay Natural History Society*, 14 (3), 419–449.
- Dusmet, J.M. [Dusmet y Alonso, J.M.] (1896) Algunos datos para el estudio de los Tenthredínidos de España. *Anales de la Sociedad Española de Historia Natural*, 2. Ser., 5[=25], 119–172 (reprint pp. 1–54).
- Dusmet, J.M. (1949) Revisión de los Tenthredínidos de España. *Publicaciones de la Real Academia de Ciencias Exactas, Físicas y Naturales (Centenario)*, Madrid, 1(10), 441–484.
- Enslin, E. (1914) Ueber Tenthrediniden aus Spanien. Nebst einer Bestimmungstabelle der paläarktischen *Tomostethus*. *Archiv für Naturgeschichte*, 79 Abt. A [1913] (9), 165–171.
- Enslin, E. (1915) Die Tenthredinoidea Mitteleuropas IV. *Deutsche Entomologische Zeitschrift*, [1915] (Beiheft 4), 311–412.
- Enslin, E. (1916) Die Tenthredinoidea Mitteleuropas V. *Deutsche Entomologische Zeitschrift*, [1916] (Beiheft 5), 413–538.
- Eversmann, E. (1847) Fauna hymenopterologica volgo-uralensis exhibens Hymenopterorum species quas in provinciis Volgam fluvium inter et montes Uralenses sitis observavit et nunc descripsit. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 20 (1), 3–68.
- Fitton, M.G. (1978) Hymenoptera. In: Kloet, G.S. & Hincks, W.D. (Eds.), *A checklist of British Insects. Handbooks for the Identification of British Insects*, 11 (4), 1–159.
- Forsius, R. (1910) Eine neue Selandriaden-Gattung. *Meddelanden af Societas pro Fauna et Flora Fennica*, 36 [1909–1910], 49–52, 218.
- Forsius, R. (1919) Kleinere Mitteilungen über Tenthredinoiden I. *Meddelanden af Societas pro Fauna et Flora Fennica*, 45 [1918–1919], 165–169.
- Forsius, R. (1921) Zur Kenntniss einiger Blattwespen und Blattwespenlarven II [recte III]. *Meddelanden af Societas pro Fauna et Flora Fennica*, 46 [1919–1920], 25–32.
- Forster, J.R. (1771) *Novae species insectorum. Centuria I*. T. Davies & B. White, Londini, pp. i–iv + 1–100.
- Haris, A. (2004a) Four new *Tenthredo* Linnaeus, 1758 species from Sikkim (Hymenoptera, Tenthredinidae). *Graellsia*, 60 (2), 155–161.  
<http://dx.doi.org/10.3989/graeellsia.2004.v60.i2.210>
- Haris, A. (2004b) New sawflies from Spain (Hymenoptera, Tenthredinidae). *Graellsia*, 60 (2), 163–165.  
<http://dx.doi.org/10.3989/graeellsia.2004.v60.i2.211>
- International Commission on Zoological Nomenclature (ICZN) (1999) *International code of zoological nomenclature. Fourth edition*. London (International Trust for zoological Nomenclature), i–xxix + 1–306.
- Jacobs, H.J., Blank, S.M. & Taeger, A. (in litt.) The dwarf cimbicids, *Corynis* (Hymenoptera, Cimbicidae): identification and distribution.
- Jakowlew, A. (1891) Diagnoses Tenthredinidarum novarum ex Rossia Europaea, Sibiria, Asia Media et confinium. *Trudy Russkogo Entomologiceskogo Obscestva v S. Peterburge*, 26[1892], 1–62 (Separatum, preprint). [in Russian and Latin]
- Klug, F. (1814) Die Blattwespen nach ihren Gattungen und Arten zusammengestellt. *Der Gesellschaft Naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der gesamten Naturkunde*, 6 (1812) (4), 276–310.
- Klug, F. (1815) Die Blattwespen nach ihren Gattungen und Arten zusammengestellt. *Der Gesellschaft Naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der gesamten Naturkunde*, 7 (1813) (2), 120–131.
- Klug, F. (1834) Uebersicht der Tenthredinetæ der Sammlung. *Jahrbücher der Insectenkunde mit besonderer Rücksicht auf die Sammlung des Königl. Museum in Berlin herausgegeben*, 1, 223–253.
- Koch, F. (1998) Die Symphyta der Äthiopischen Region. Gattung *Neacidiophora* Enslin 1911 (Insecta: Hymenoptera: Tenthredinidae: Allantinae). *Entomologische Abhandlungen, Staatliches Museum für Tierkunde in Dresden*, 58 [1997] (5), 83–118.
- Konow, F.W. (1885) Ueber die Blattwespen Gattungen *Strongylogaster* Dahlb. und *Selandria* Klg. *Wiener entomologische Zeitung*, 4, 19–26.
- Konow, F.W. (1894a) Neue europäische Blattwespen, nebst Bemerkungen über einige bisher verkannte Arten. *Wiener Entomologische Zeitung*, 13, 84–96.
- Konow, F.W. (1894b) Une nouvelle Tenthredinide de France. *Revue d'Entomologie*, Caen, 13, 284.
- Konow, F.W. (1895) Analytische und kritische Bearbeitung der Gattung *Amauronematus* Knw. *Természetrájsi Füzetek*, 18, 166–187.
- Konow, F.W. (1897) Systematische und kritische Bearbeitung der Blattwespen-Tribus Lydini. *Annalen des K. K. Naturhistorischen Hofmuseums, Wien*, 12 (1), 1–32.
- Konow, F.W. (1898) Neue Asiatische Tenthrediniden. *Entomologische Nachrichten (Herausgegeben von Dr. F. Karsch)*, 24 (7), 105–109.
- Konow, F.W. (1899) Chalastogastrorum novae species et varietates, quas D. Escalera ex Asia minore reportavit. *Actas de la Sociedad Española de Historia Natural*, 28 (7), 203–207.

- Konow, F.W. (1904) Neue paläarktische [sic!] Chalastogastra. *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 4 (4), 226–231.
- Konow, F.W. (1905a) Zwei neue *Amasis*-Arten. (Hym.). *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 5 (4), 242–244.
- Konow, F.W. (1905b) De Tenthredinibus Miscellanea. (Hym.). *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 5 (3), 151–157.
- Konow, F.W. (1906) Ueber einige Tenthrediniden der alten Welt. (Hym.). *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 6 (2), 122–127.
- Konow, F.W. (1907a) Neue Blattwespen (Hym.). *Deutsche Entomologische Zeitschrift*, 1907, 489–497.
- Konow, F.W. (1907b) Neue Chalastogastra aus den naturhist. Museen in Hamburg und Madrid. *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 7 (2), 161–174.
- Konow, F.W. (1907c) Neue Argides. (Hym.). *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 7 (4), 306–309.
- Konow, F.W. (1907d) Drei neue *Labidarge*-Arten. (Hym.). *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 7 (3), 220–221.
- Konow, F.W. (1907e) Systematische Zusammenstellung der bisher bekannt gewordenen Chalastogastra (Hymenopterorum subordo tertius). *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 7 (5), 417–432 [= 2, 145–160].
- Konow, F.W. (1908) Neue Tenthrediniden aus Sikkim. (Hym.). *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 8 (1), 19–26.
- Kopelke, J.-P. (1991) Die Arten der *viminalis*-Gruppe, Gattung *Pontania* O. Costa 1859, Mittel- und Nordeuropas (Insecta: Hymenoptera: Tenthredinidae). *Senckenbergiana Biologica*, 71 [1990] (1–3), 65–128.
- Lepeletier, A.L.M. [Lepeletier de Saint Fargeau] (1823) *Monographia Tenthredinetarum synonymia extricata*. Apud Auctorem [etc.], Parisiis, pp. 1–176.
- Lindqvist, E. (1954) Eine Revision der von Thomson beschriebenen Nematinen (Hym. Tenthredinidae). *Opuscula Entomologica*, 19, 150–164.
- Lindqvist, E. (1955) Beitrag zur Kenntnis einiger nordischen Blattwespen (Hym., Tenthredinoidea). *Notulae Entomologicae*, 35, 137–144.
- Lindqvist, E. (1961) Über *Amauronematus tunicatus* Zadd. und naheverwandte Arten (Hym., Tenthred.). *Notulae Entomologicae*, 41, 5–8.
- Linnaeus, C. (1758) *Systema Naturae, per regna tria naturae secundum classes, ordines, genera, species cum characteribus, differentiis, synonymis, locis. Editio Decima, Reformata. Vol. 1. 10th Ed.* Laurentius Salvius, Holmiae, 824 pp.
- Malaise, R. (1931) Entomologische Ergebnisse der schwedischen Kamtschatka Expedition 1920–1922. (35. Tenthredinidae). [Separatum]. *Arkiv för Zoologi*, 23[1931–1932] (2 [A8]), 1–68.
- Malaise, R. (1937a) Old and new genera of Arginae (Hymen. Tenthred.). *Entomologisk Tidskrift*, 58 (1–2), 47–59.
- Malaise, R. (1937b) New Tenthredinidae mainly from the Paris Museum. *Revue française d'Entomologie*, 4, 43–53.
- Malaise, R. (1945) Tenthredinoidea of South-Eastern Asia with a general zoogeographical review. *Opuscula Entomologica, Lund, Suppl.* 4, 1–288.
- Malaise, R. & Benson, R.B. (1934) The Linnean Types of Sawflies (Hymenoptera, Symphyta). *Arkiv för Zoologi*, 26 (4 [A20]), 1–14.
- Martín Albaladejo, C. (2004) *Bibliografía entomológica de autores españoles (1758–2000)*. CD-ROM. Museo Nacional de Ciencias Naturales, CSIC. ISBN: 84–609–3574–4.
- Mol, A. (in prep.) Revision of the Genus *Periclista* Konow.
- Niu, G.-Y. & Wei, M. (2013) Revision of the *Siobla formosana* group (Hymenoptera: Tenthredinidae). *Zootaxa*, 3746 (1), 41–68.  
<http://dx.doi.org/10.11646/zootaxa.3746.1.2>
- Norton, E. (1867) Catalogue of the described Tenthredinidae and Uroceridae of North America. *Transactions of the American Entomological Society*, 1 (1), 31–84.  
<http://dx.doi.org/10.2307/25076170>
- Oehlke, J. & Wudowenz, J. (1984) Katalog der in den Sammlungen der Abteilung Taxonomie der Insekten des Institutes für Pflanzenschutzforschung, Bereich Eberswalde (ehemals Deutsches Entomologisches Institut), aufbewahrten Typen - XXII (Hymenoptera: Symphyta). *Beiträge zur Entomologie*, 34 (2), 363–420.
- Panzer, G.W.F. ([1803]) *Fauna Insectorum Germanicae initia oder Deutschlands Insecten*. Nürnberg, Felssecker 8[1801–1804] (86–94), each 1–24 pp. & 24 col. plates.
- Pasteels, J.-J. (1963) Prodrome d'une faune des Tenthredinoidea de l'Afrique noire. IV. - 2e supplement aux Argidae. *Bulletin & annales de la Société Royale d'Entomologie de Belgique*, 99 (37), 540–560.
- Radoszkovsky, O. (1871) Hyménoptères de l'Asie. Description et énumération de quelques espèces reçues de Samarkand, Astrabad, Himalaya et Ning-Po, en Chine. *Horae Societatis Entomologicae Rossicae*, 8 (3), 187–200, pl. VII.
- Rohwer, S.A. (1910) Japanese sawflies in the collection of the United States National Museum. *Proceedings of the United States National Museum*, 39 (1777), 99–120.  
<http://dx.doi.org/10.5479/si.00963801.1777.99>
- Saini, M.S. (2007) Genus *Tenthredo* Linnaeus (Hymenoptera, Symphyta: Tenthredinidae). In: *Indian Sawflies Biodiversity. Keys, Catalogue & Illustrations*. Bishen Singh Mahendra Pal Singh, Dehra Dun 1, pp. [1–7] + 1–249.



- Saini, M.S., Blank, S.M. & Smith, D.R. (2006) Checklist of the Sawflies (Hymenoptera: Symphyta) of India. *In*: Blank, S.M., Schmidt, S. & Taeger, A. (Eds.), *Recent Sawfly Research: Synthesis and Prospects*. Goecke & Evers, Keltern, pp. 575–612.
- Saini, M.S. & Thind, A.S. (1995) Revision of genus *Arge* Schrank from India (Hymenoptera, Symphyta, Argidae). *Deutsche entomologische Zeitschrift, Neue Folge*, 42 (1), 71–111.  
<http://dx.doi.org/10.1002/mmnd.19950420109>
- Santos Mazorra, C.M. (1994) *Catálogo de los insectos recolectados por la comisión científica del Pacífico (1862-1865)*. Manuales técnicos de museología, 5. Museo Nacional de Ciencias Naturales, Madrid. 1–196.
- Schedl, W. (2009) Die Pflanzenwespen von Syrien (Hymenoptera: Symphyta) - ein Überblick. *Linzer biologische Beiträge*, 41 (2), 1609–1630.
- Schrank, F. von P. (1776) *Beiträge zur Naturgeschichte*. Gebr. Veith, Augsburg, [6] + 137 + [3] pp.
- Schrank, F. von P. (1802) *Fauna Boica. Durchgedachte Geschichte der in Baiern einheimischen und zahmen Thiere. Zweiter Band. Zweite Abtheilung*. Bey Johann Wilhelm Krüll, Ingolstadt, 412 pp.
- Scopoli, I.A. (1763) *Entomologia Carniolica exhibens insecta Carnioliae indigena et distributa in ordines, genera, species, varietates, methodo Linneana*. Vindobonae, I.T. Trattner, [2]+[8]+[22]+420+[4] pp.
- Smith, D.R. (1992) A synopsis of the sawflies (Hymenoptera: Symphyta) of America south of the United States: Argidae. *Memoirs of the American Entomological Society, Philadelphia*, 39, 1–201.
- Smith, D.R. (2006) A new sawfly genus from India for the "forgotten" *Periclista bumasta* Konow, 1907 (Hymenoptera: Tenthredinidae). *Entomological News*, 117 (3), 261–264.  
[http://dx.doi.org/10.3157/0013-872x\(2006\)117\[261:ansgfi\]2.0.co;2](http://dx.doi.org/10.3157/0013-872x(2006)117[261:ansgfi]2.0.co;2)
- Smith, F. (1878) Hymenoptera. *Scientific results of the second Yarkand mission; based upon the collections and notes of the late Ferdinand Stoliczka, Ph. D.* Calcutta, pp. 1–22.
- Spinola, M. (1843) Sur quelques Hyménoptères peu connus, recueillis en Espagne, pendant l'année 1842, par M. Victor Ghiliani, voyageur-naturaliste. *Annales de la Société Entomologique de France*, Ser. 2, 1, 111–162.
- Taeger, A. (1985) Zur Systematik der Blattwespengattung *Tenthredo* (s. str.) L. (Hymenoptera, Symphyta, Tenthredinidae). *Entomologische Abhandlungen*, 48 [1984] (8), 83–148.
- Taeger, A. (1988) Dritter Beitrag zur Kenntnis der Blattwespengattung *Tenthredo* L. (Hymenoptera, Symphyta: Tenthredinidae). *Beiträge zur Entomologie*, 38 (2), 337–359.
- Taeger, A. (1991a) Vierter Beitrag zur Systematik der Blattwespengattung *Tenthredo* Linnaeus. Die Untergattung *Zomuledo* Zhelochovtsev, 1988 (Hymenoptera, Tenthredinidae). *Entomofauna. Zeitschrift für Entomologie*, 12 (23), 373–398.
- Taeger, A. (1991b) Zwei neue paläarktische Blattwespengattungen aus der Unterfamilie Tenthredininae (Insecta, Hymenoptera, Symphyta: Tenthredinidae). *Entomologische Abhandlungen*, 54 (3), 71–95.
- Taeger, A. (1998) Die Megalodontesidae Europas (Hymenoptera: Symphyta). *In*: Taeger, A. & Blank, S.M. (Eds.), *Pflanzenwespen Deutschlands (Hymenoptera, Symphyta). Kommentierte Bestandsaufnahme*. Goecke & Evers, Keltern, pp. 175–192.
- Taeger, A. (2002) The Megalodontesidae of Europe (Hymenoptera, Symphyta). *In*: Viitasaari, M. (Ed.), *Sawflies (Hymenoptera, Symphyta) I. A review of the suborder, the Western Palaearctic taxa of Xyeloidea and Pamphilioidea*. Tremex Press Ltd., Helsinki, pp. 461–480.
- Taeger, A., Blank, S.M. & Liston, A.D. (2010) World Catalog of Symphyta (Hymenoptera). *Zootaxa*, 2580, 1–1064.
- Taeger, A. & Vårdal, H. (in prep.) Revision of René Malaise's types in the Naturhistoriska riksmuseet, Stockholm.
- Thomson, C.G. (1871) *Hymenoptera Scandinaviae (Tenthredo et Sirex Lin.)*. Vol. 1. Lundae, H. Olsson. pp. 1–342.
- Vikberg, V. & Zinovjev, A. (2006) On the taxonomy and the host plants of North European species of *Eupontania* (Hymenoptera: Tenthredinidae: Nematinae). *Beiträge zur Entomologie*, 56 (2), 239–268.
- Zhelochovtsev, A.N. (1988) 27. Otryad Hymenoptera–Pereponchatokrylye Podotryad Symphyta (Chalastogastra)–Sidyachebryuhie [by Zhelochovtsev, A.N. & Zinovjev, A.G.] *In*: Zhelohovcev, A.N., Tobias, V.I. & Kozlov, M.A. (Eds.), *Opredelitel' nasekomyh evropejskoj chasti SSSR. T. III. Pereponchatokrylye. Shestaja chast'.* (*Opredeliteli po faune SSSR, izdavaemye Zoologicheskim institutom AN SSSR; Vyp. 158*). [27. Order Hymenoptera–Wasps Suborder Symphyta (Chalastogastra)–Sawflies and woodwasps. *Key to the insects of the European part of the USSR. Vol. III. Hymenoptera. Sixth part. (Keys to the fauna of the USSR, edited by the Zoological Institute of the Academy of Sciences of the USSR; Vol. 158).*] Nauka, Leningrad, pp. 7–237. [in Russian]
- Zirngiebl, L. (1953) Tenthredinoiden aus der Zoologischen Staatssammlung in München. *Mitteilungen der Münchner Entomologischen Gesellschaft*, 43, 234–238.